A Work Project, presented as part of the requirements for the Award of a Master's degree in Finance from the NOVA – School of Business and Economics

SOUTHWEST AIRLINES CO.: CONSISTENCY FOR THE FUTURE

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Abstract

This Work Project consists of an Equity Research report of Southwest Airlines Co., forecasting the future company's performance. Currently, the company is one of the market leaders and has a higher operating margin than the industry. However, the arising of low-cost and ultra-low-cost airlines will increase the industry's price pressure. Moreover, the company will face operating costs management challenges in the future, mainly related to labor and fuel, which will affect its operating margin, enhancing the company's concerns regarding increasing operational measures. Hence, it was issued a "Hold" recommendation, estimating a price target of $58.76, as of December 2020.

Keywords: Operating Margin, ASM, Fuel, Labor

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SOUTHWEST AIRLINES CO.

COMPANY REPORT

INDUSTRIALS - AIRLINES

6 JANUARY 2020

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Consistency for the Future

The challenge of rising costs and competition

- The price target FY20 is $58.76. With the dividends distribution and shares repurchases, the expected total shareholder return, during 2020, will be nearly 7.14%. Therefore, the recommendation for Southwest Airlines Co. is HOLD.
- Southwest Airlines Co. has been carried by the momentum created by the consumption pattern of the airline industry. Low-cost carriers have been gaining more and more customers, increasing their market share from 16% in 2006 to 31% in 2018.
- Southwest Airlines Co.'s operating performance relies on a business model based on effective cost management, logistic efficiency and organizational culture, which allows the company to achieve higher operating margins than its peers.
- In the future, it is expected that the company's revenues will continue to increase due to its steady expansion in Latin America and the cementing of its current U.S. market position.
- The arising of low-cost and ultra-low-cost carriers, the increasing competition through price, the rising fuel prices and the transformation of the labor market are the main challenges that will affect the company's ability to maintain high margins.

Company description

Founded in 1967, Southwest Airlines Co. is headquartered in Dallas, Texas and is considered one of the world's largest low-cost carriers.
The company has scheduled flights for 41 states in the United States of America and 10 other countries, operating over 4,000 flights per day.

Recommendation:	**HOLD**
Vs Previous Recommendation	*n.a.*
Price Target FY20:	**58.76 $**
Vs Previous Price Target	*n.a.*
Price (as of 2-Jan-2020)	**54.84 $**

Reuters: LUV.N

52-week range ($)	44.61-58.77
Market Cap (billions of $)	28.6
Outstanding Shares (millions)	526.27

Source: Bloomberg (02/01/2020)

Figure: 5-year cumulative weekly returns as of December 2019 (LUV and S&P500)
Source: Fidelity

(in millions of dollars, except share amount)	2018	2019E	2020F
Revenues	21,965	22,679	23,418
EBITDA	4,407	4,094	4,003
EBITDA margin	20.06%	18.05%	17.09%
Net Income	2,465	1,894	1,830
Net Margin	11.22%	8.35%	7.81%
Operating ROIC	33.73%	29.67%	27.75%
ROE	25.57%	19.22%	17.46%

Source: Annual report and analysts' estimates

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Executive summary

The airline industry is intrinsically affected by external shocks in terms of economic activity and fuel price. Nowadays, the good economic situation of the U.S. and the low regulatory constraints of the airline industry have led to increased competitiveness and the change of consumer consumption patterns, using more frequently airplanes to travel.

Although over 100 new airlines have entered this sector in the last 40 years and consumer switching costs are low, the industry is going through a consolidation period driven by M&A activity which has reduced market players and allowed it to be dominated by four major players (Southwest Airlines Co., American Airlines, Delta Air Lines and United Airlines). However, in the last few years, the rise of low-cost and ultra-low-cost airlines, such as JetBlue Airways or Spirit Airlines, has conquered consumers through low fares, increasing the price and margins pressure in the industry.

Southwest Airlines Co. positions itself as the only low-cost airline capable of competing directly with the three largest legacy carriers in the market, in terms of market share. Through its business model, which is based on effective cost management, logistics efficiency and organizational culture, Southwest Airlines Co.'s achieved one of the lowest CASMs in the industry, being the company with the highest operating margin in the industry (EBITDA margin of 20.06% in 2018, compared to a peer's average of 13.20%).

Despite being expected that, in the future, the company's revenues will continue to increase due to its steady expansion in Latin America and the cementing of the U.S.'s market position, the competitive pressure will jeopardize Southwest Airlines Co.'s performance. The arising of low-cost and ultra-low-cost carriers, the competition through price, the rising fuel prices and the transformation of the labor market will cause Southwest Airlines Co.'s operating margin to converge to the average of the industry's largest airlines in the U.S., in the long-term.

It is estimated that the total shareholder's gains, which include dividends of $0.72 per share and gains of $3.61 per share due to share repurchases, will be $3.92 (7.14%) during 2020. This gain is computed comparing the share price yielded by the DCF valuation method and a price per share of $54.84 as of 2nd January 2020. Hence, a "Hold" recommendation is issued.

Company overview

Company description

Initially called Air Southwest Co., Southwest Airlines Co. was founded on March 15, 1967, by Herb Kelleher and Rollin King and was headquartered in Dallas, Texas. After the lawsuits filed by three other airlines were revolved, the company started operating regularly in 1971 as an intrastate carrier in Texas, having scheduled flights between Dallas Love Field, Houston and San Antonio. The intent of these legal actions constituted by these Airlines was to "*try to prevent the company from its planned strategy of undercutting their prices by flying only within Texas and thus being exempt from various regulations*" [1].

Since its early days, the founders of the company had a clearly outlined vision and aimed at differentiating Southwest Airlines Co. from its competitors: "*If you get your passengers to their destinations when they want to get there, on time, at the lowest possible fares, and make darn sure they have a good time doing it, people will fly your airline*"[2]. Hence, during the '70s, the company's management team always sought to fulfill the vision of its founders by executing operational measures that would increase cost optimization and, consequently, lower fares. The company presented pioneering measures such as a lower night fare, every-hour service or the establishment of permanent lower fares (*e.g.* $13 fare becomes permanent fare between DAL-SAT).

Based on a cost leadership strategy, Southwest Airlines Co. was able to increase the number of flights per day and shorten the turnaround time (*i.e*. the time required to prepare the flight). In 1975, the company expanded to more cities within Texas, in 1979 it expanded to other states in the Southern U.S. and in the '90s expanded to the rest of the country, especially to the East and Southeast.

Currently, Southwest Airlines Co. has approximately 58,800 active full-time equivalent employees and operates about 4,000 flights per day during the busy season. The company has scheduled flights for 41 U.S. states and ten other countries (Aruba, Bahamas, Belize, Cayman Islands, Costa Rica, Cuba, Dominican Republic, Jamaica, Mexico and Turks and Caicos Islands), being the airline that carries the greatest number of passengers within the U.S.[3].

Stock performance

According to Southwest Airlines Co.'s website, the company launched its Initial

[1] Source: PopularTimelines, 2019 (https://populartimelines.com/timeline/Southwest-Airlines)
[2] Source: Southwest Airlines Co., 2019 (https://www.southwest.com/html/about-southwest/index.html)
[3] Source: Southwest Airlines, 2018 (Southwest Airlines Co's Annual Report of 2018).

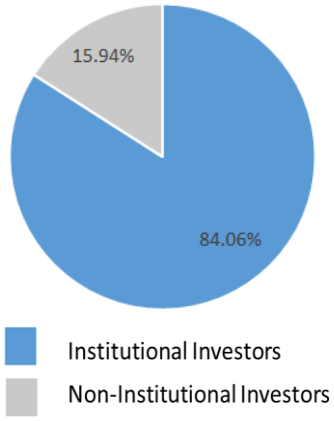

Figure 1: Southwest Airlines Co. Shareholders Structure
Source: NASDAQ

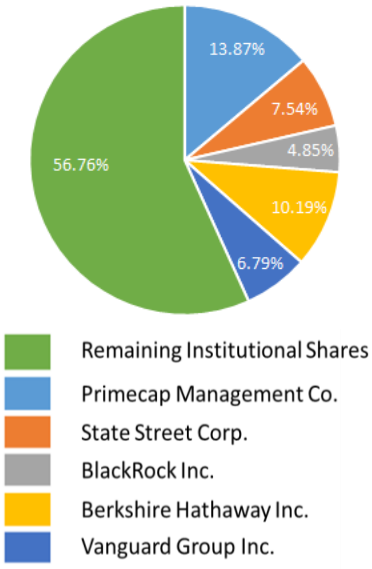

Figure 2: Southwest Airlines Co. Shareholders Structure (within Institutional Investors)
Source: NASDAQ

Public Offering (IPO) in June 1971, for 650,000 stocks at nearly $11. As of November 17th, Southwest Airlines Co. has a stock price high record of $58.77 and a low of $44.61 over the last 52 weeks[4]. LUV is the stock ticker used in the NYSE (New York Stock Exchange).

Southwest Airlines Co.'s share price has steadily increased over the last five years. As of September 2014, the share price was $29.26 risen to $52.14 five years later. During this period, the biggest drops in the share price were mainly due to changes in the fuel price (October 2018[5]) or when the company reports that it expects to have revenue drops (March 2018[6]).

Shareholder structure

Currently, Southwest Airlines Co. is going through a stage of executive stability. Since 2008, Gary C. Kelly has served as Chairman of the Board of Directors and President of Southwest Airlines Co., replacing Herb Kelleher and Colleen Barrett, respectively.

As of December 2019, 84.06% of the 526,276,126 shares issued by Southwest Airlines Co. belong to institutional investors, with the remaining 15.94% belonging to, for instance, other mutual funds, insider ownership or the general public (Figure 1). Within the institutional investors (Figure 2), the greater equity participation belongs to Primecap Management Co. (13.87%), followed by Berkshire Hathaway Inc. (10.19%), State Street Corp. (7.54%), Vanguard Group In. (6.79%) and BlackRock Inc. (4.85%)[7]. The remaining 56.76% of shares belong to other institutional investors with smaller stakes. According to the *Fidelity* website, Gary C. Kelly, Thomas M. Nealon (the president) and Tammy Romo share the portion of equity held by insider ownership[8], which totals 0.4%.

Institutional ownership can improve corporate governance and performance by being stricter with management. However, there is a fundamental conflict between short-term gains and long-term sustainability as objectives for institutional investment. The short-term incentives can lead to underinvestment and exacerbate managerial myopia[9]. Moreover, institutional ownership can also lead to higher stock volatility. Short-term trades performed by institutional investors can create signaling effects, as institutional investors are perceived has

[4] Source: NYSE, 2019 (https://www.reuters.com/companies/LUV.N)
[5] Source: TheMotleyFool, 2018 (https://www.fool.com/investing/2018/11/11/why-did-shares-of-southwest-airlines-co-drop-21-in.aspx)
[6] Source: Financial Times, 2018 (https://www.ft.com/content/60fb1fac-68d5-11e8-b6eb-4acfcfb08c11)
[7] Source: NASDAQ, 2019 (https://www.nasdaq.com/symbol/luv/ownership-summary)
[8] Source: Fidelity, 2019 (https://eresearch.fidelity.com/eresearch/evaluate/fundamentals/ownership.jhtml?stockspage=ownership&symbols=luv)
[9] Source: Samuel, Cherian. 1996. *The governance role of the Market* (http://documents.worldbank.org/curated/en/956491468739148596/110510322_20041117175524/additional/multi0page.pdf)

well-informed investors[10].

Shares buybacks and dividends

Lately, Southwest Airlines Co. has been doing a great endeavor to reward its investors mostly in two ways: dividends and share buybacks, amounting to $11 billion from 2010 to 2018, combined.

In 2018, due to the corporate tax reform, which decreased the corporate tax rate from 35% to 21%, Southwest Airlines Co. increased its cash holdings. The company's CEO used this circumstance to increase dividends per share to $0.72 annually (which translates to an average 1.4% dividend yield) compared to $0.16 annualized five years ago. Also, the company's executive board approved a new share buyback plan worth two billion dollars.

Share buybacks present themselves as a preferable option versus dividends regarding rewarding shareholders in the short term for three main reasons: it is not subject to the signaling effects of the reduction or interruption of dividend payment[11], share buybacks are more flexible (the company can slow down or even cancel the plan at any time) and are a better alternative to dividends in terms of tax policies since dividends are taxed twice. The first tax occurs on the income since dividends are paid out of the net income, then the government imposes a tax called "dividend distribution tax" which occurs at the distribution. Share buybacks are taxed only on the actual sale of shares, not having the investor to pay additional taxes. However, probably the shares will be negotiated at a premium[12], as companies use these methods to incentivize the investors to take part in the process and push the price upward.

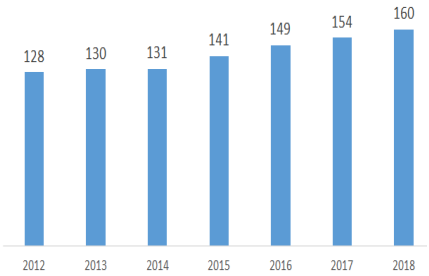

Figure 3: Southwest Airlines Co. – ASM (in billions)
Source: Annual Reports

Due to the new corporate tax reform and the impact of signaling effects in the market, it is expected that Southwest Airlines Co. will continue to return gains to its shareholders, using dividends as a way of doing so and not decreasing the optimal level of dividends.

Operating performance

Southwest Airlines Co. has increased its operating capacity in the last few years. Since 2012, Southwest Airlines Co. has increased its ASM (Available Seat Miles) by about 25% (Figure 3), which translated into 160 billion in 2018. This increase was partly supported by the capacity increase of the fleet. From 2012 until 2018, the company increased its average seat per trip from 135 to 150 seats (Figure 4).

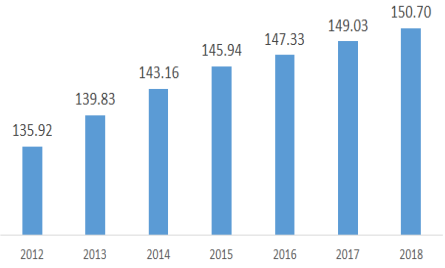

Figure 4: Southwest Airlines Co. – Average seats per trip
Source: Annual Reports

[10] Source: Gharbi et al.2015. *Can Institutional investors typology influence firm's risk* (https://www.cairn.info/revue-gestion-2000-2014-1-page-199.html)
[11] Source: Bula, Laarni. 2010. *To cut or not to cut a Dividend* (http://people.brandeis.edu/~lbulan/divcuts.pdf)
[12] Source: CFI, 2019. (https://corporatefinanceinstitute.com/resources/knowledge/finance/dividend-vs-share-buyback-repurchase/)

Moreover, Southwest Airlines Co. was able to maintain its load factor over 80% during this period, while its passenger revenue yield by RPM (Revenue Passenger Mile) decreased slightly (Figure 5).

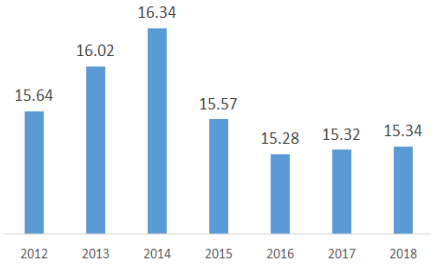

Figure 5: Southwest Airlines Co. – Passenger revenue yield per RPM (in cents)
Source: Annual Reports

Currently, Southwest Airlines Co. operates in two main business segments: Passenger and Cargo, which represented 93.1% and 0.8% of revenues at the end of 2018, respectively. While the first one is associated with the transportation of passengers, the second one is related to the transportation of air cargo. The company operates in the domestic market (U.S.) and Latin America in both segments. According to the company's annual report, Southwest Airlines Co. also has another segment called Other Revenues, which comprises 6.1% of revenues in 2018. This segment concentrates revenues related to "*marketing royalties associated with the Company's co-branded Chase® Visa credit card but also includes commissions and advertising associated with Southwest.com®*"[3].

Southwest Airlines Co. provides a no-frills service. Also, unlike other low-cost airlines, the company does not provide on-board meals or other ancillary services, reinforcing the company's low-cost strategy. Hence, the company's ancillary revenues are almost entirely comprised of revenues from *EarlyBird Check-In®* and *Upgraded Boarding* (seat reservation).

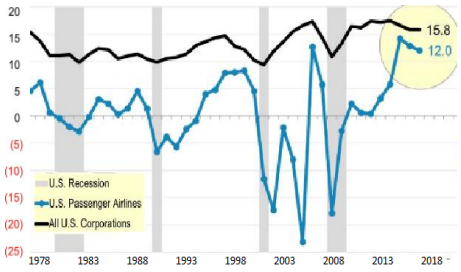

Figure 6: Pre-tax Profit Margin (%)
Source: Bureau of economic analysis

Macroeconomic outlook

The Airline Deregulation Act (1978) removed the federal government control over areas such as fares, routes and the entrance of new competitors in this industry. This resulted in an increase of players in the airline sector, lower fares and more flights. The number of passengers increased from 207.5 million in 1978 to 1,011.5 million in 2018[13]. Since 1978, the U.S.'s airline industry has been characterized by boom-to-bust cycles (Figure 6). This is assumed to be related to the capital intensive but cash poor, typical of the airline industry.

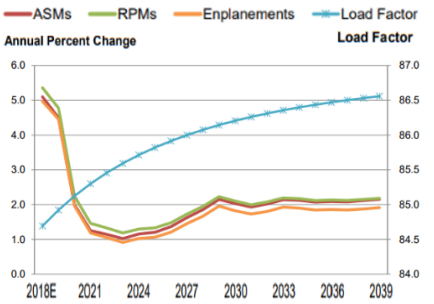

Figure 7: Metrics Forecast
Source: Federal Aviation Administration

There is a great dependence between aviation metrics such as ASM, RPM and economic indicators like the GDP growth, as it will be addressed in the "Business risks" topic. Therefore, aviation demand is mainly affected by the state of the economy. The airline industry growth, regarding ASM and enplanements, over the next 20 years is expected to average 1.8% per year (Figure 7), driven by the U.S. economic growth.

Industry overview

[13] Source: Bureau of transportation statistics, 2018 (https://www.bts.dot.gov/newsroom/2018-traffic-data-us-airlines-and-foreign-airlines-us-flights)

Threat of new entrants

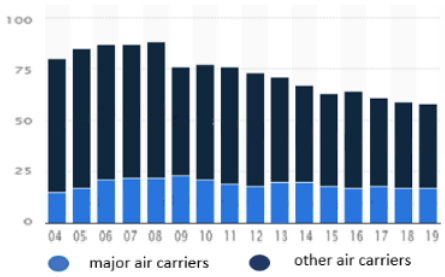

Figure 8: Number of air carriers in the US (2004 to 2019)
Source: Statista

Potential new entrants to the marketplace represent a moderate threat in this industry. After the Airline Deregulation Act in 1978, many airlines entered the marketplace, with over 100 airlines being founded since then[14]. However, as can be seen in Figure 8, the number of airlines has been decreasing steadily, via M&A, since 2008.

Due to its capital-intensive nature, the initial investments (fixed costs) are significant and barriers to entry and exit are high. Nonetheless, this impact is mitigated due to the availability of leasing options and financing from banks, investors and aircraft manufacturers[15]. For instance, Silver Airways, a recent regional airline that was founded in 2011, was financed by Versa Capital Management, a private equity fund[16], to start operations.

Another issue is the right to use airport slots which IATA distributes between airlines. Airlines that want to enter a new market are forced either to lease or buy slots from airlines. This represents a significant operational cost, varying according to the localization of the airport. For instance, American Airlines bought a pair of slots from Scandinavian Airlines for $60 million in 2015[17].

Bargaining power of buyers

Buyers have moderate power in the industry. As price is an important factor in this industry, low-cost airlines have a competitive advantage since a lot of airlines (regional and mainline) offer the same product. Hence, there is no differentiation and a low possibility for added value. Customers can switch from airline to airline without any cost and will more likely get better deals. Airlines try to avoid losing customers by creating loyalty programs, such as *Rapid Rewards* in the case of Southwest Airlines Co. or *SkyMiles* in the case of Delta Air Lines.

Due to websites that enable price comparison between airlines (such as *Expedia*, *Kayak* or *Priceline*), nowadays the customer has access to price transparency and can make more informed decisions. To cope with this, airlines introduced the concept of ancillary services. These are products and services that are sold to the passenger beyond the core transportation and can include bags, seats, priority boarding or insurance. Ancillary revenues have clear advantages to airlines and costumers. Firstly, airlines can give these products and services to their loyal customers for free, creating customer loyalty. Secondly, it is a good

[14] Source: Wikipedia, 2019 (https://en.wikipedia.org/wiki/List_of_airlines_of_the_United_States)
[15] Source: Marketrealist, 2014 (https://articles2.marketrealist.com/2014/12/low-entry-barriers-intensify-competition-airline-industry/)
[16] Source: Silver Airways, 2019 (https://www.silverairways.com/about-silver/company-information)
[17] Source: Simpleflying, 2019 (https://simpleflying.com/inside-airportslots/)

way to get a higher yield per passenger without increasing ticket prices. Thirdly, these ancillary fares are not taken into consideration on websites that enable price comparison. Consequently, this type of revenue has been increasing as can be seen in Figure 9 and is expected to continue to be a trend in this industry.

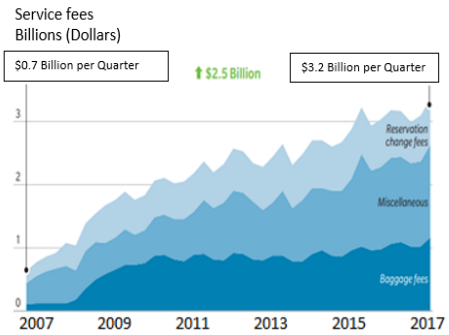

Figure 9: Ancillary revenues
Source: Airline economic analysis (2017 – 2018) - Oliver Wyman

Threat of substitute products or services

Substitute services are traveling options other than using airlines, such as by car, train or boats. Even though some of these methods of traveling have their benefits (such as comfort, convenience, and price), when it comes to traveling long distances, which tends to happen in the U.S., these options are lackluster. The U.S. does not have high-speed rails, such as countries like Japan (Shinkansen) and France (TGV-Train à Grande Vitesse), which tend to be a good alternative to air travel. There are talks about the possible construction of high-speed rails[18], but it is not expected to be established in the foreseeable future. Therefore, it does not represent a threat. In terms of security, airlines present themselves as the safest option. From 2014 to 2017 there were no fatalities in flights of the main U.S. air carriers[19], boosting consumer trust.

Between 2003 and 2018, the number of passengers carried increased by about 33%[20], demonstrating that Americans progressively choose more air transportation as a long-haul mode of transport. Hence, the threat of substitute services to air travel seems to be low and unlikely.

Bargaining power of suppliers

The bargaining power of suppliers is relevant to the airline industry, mostly due to two important supplies: fuel and aircraft.

Regarding aircraft, Boeing and Airbus SE own 43% and 45%, respectively, of the global commercial airline industry by revenue[21], demonstrating that the industry of aircraft manufacturers is highly concentrated. All main airlines in the U.S. are supplied by one or both suppliers, being dependent on the aircraft that they build and provide. However, the relation between the manufacturer of commercial aircraft and airliners is one of co-dependency. Boeing and Airbus SE depend on long term contracts with the main airlines to be able to sustain the high investment and the continuous production of aircraft.

Regarding fuel and oil expenses, it remains one of the major operating costs. In

[18] Source: Cnet, 2019 (https://www.cnet.com/news/is-high-speed-rail-in-the-us-ever-going-to-happen/)
[19] Source: Bureau of Transportation Statistics, 2019 (https://www.bts.gov/content/transportation-fatalities-mode)
[20] Source: Bureau of Transportation Statistics, 2019 (https://www.transtats.bts.gov/Data_Elements.aspx?Data=4)
[21] Source: Forbes, 2019 (https://www.forbes.com/sites/greatspeculations/2019/02/21/how-will-boeing-gain-market-share/#4ae598ed1e9b)

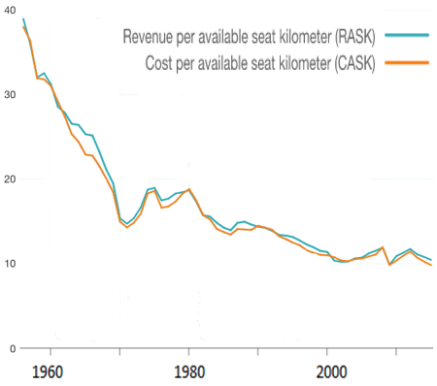

Figure 10: RASK vs CASK
Source: IATA

Figure 11: Capacity, GDP and Margin
Source: Bureau of economics

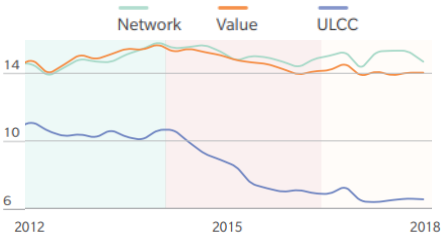

Figure 12: Passenger yield trend, domestic in cents 2012 -2018
Source: Airline Economy Analysis 2018-2019 (Oliver Wyman)

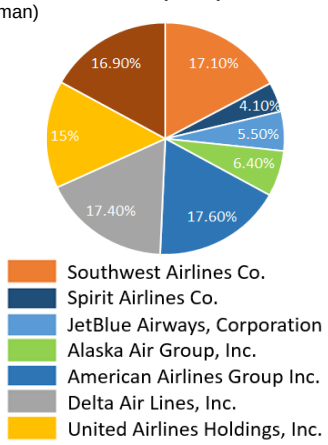

Figure 13: Market Share in Airlines Industry – North America (Oct 2018 to Sep 2019)
Source: Statista

2017 this cost represented 18.8% and 21.5% of the total operating costs for legacy and low-cost airlines, respectively[22]. Airlines are continually improving their efficiency through fleet modernization and other fuel initiatives. This resulted in an average increase in fuel efficiency of 1.5% per year, from 2009 to 2019[23]. Adding to the uncertainty concerning fuel prices, environmental laws regarding cargo ships usage of fuel with lower sulfur content – which is the same used by airlines - are being approved, which can push the demand and increase prices[22].

Competitive rivalry

Competition within the airline industry is intense. There are no independent routes when it comes to the main airlines. Hence, every airline competes on every route with every other competitor. This means that revenues follow unit costs closely and revenue premiums are quickly competed away[24] (Figure 10).

After the recession in 2009, airlines became cost driven. This led to improved margins by removing unprofitable routes and grounding older and less efficient aircraft (Figure 11). During this period, the U.S. airline industry went through a consolidation phase with three major mergers in five years. The new cost-driven mentality and the consolidation of the market resulted in 10 years of profitability for the U.S. airline industry. However, due to intensification in competition, margins have been lowering since 2015 (Figure 11).

Even though switching prices are low, competition is predominately done by companies that have been in the industry for decades. The four major airlines flew 80% of all domestic passengers as of 2018. Hence, it is likely that this oligopoly creates collusion among the largest airlines. The four companies previously mentioned were accused of setting prices, even though the demand for air travel was stagnant and operating costs, such as fuel, were declining[25]. However, since 2014 yields have been decreasing as can be seen in Figure 12.

Competitive analysis

According to *Statista* (Figure 13), from October 2018 to September 2019 American Airlines, Delta Air Lines, Southwest Airlines Co. and United Airlines shared the leadership of this market, with 17.6%, 17.4%, 17.1% and 15% of market share, respectively. Alaska Air Group and the low-cost carriers JetBlue

[22] Source: Oliver Wyman-Economic Report, 2018-2019 (https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/apr/APRIL262019_Airline_Economic_Analysis_2018-2019vFweb.pdf)
[23] Source: ICCT, 2019 (https://theicct.org/blog/staff/us-airlines-track-meet-one-carbon-goal-even-without-government-leadership)
[24] Source: Mckinsey, (https://www.mckinsey.com/industries/travel-transport-and-logistics/our-insights/a-better-approach-to-airline-costs)
[25] Source: Pro Market, 2018 (https://promarket.org/colluding-plain-sight-study-finds-airlines-use-earnings-calls-coordinate-capacity-reductions/)

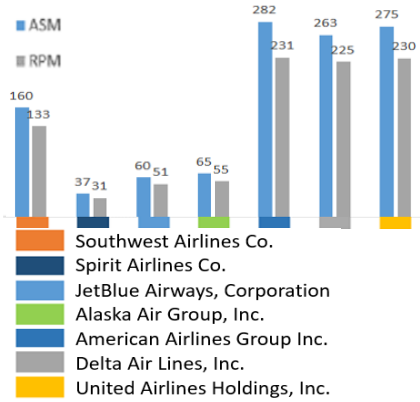

Figure 14: Operating activity by ASM and RPM (in billions in 2018)
Source: Annual Reports

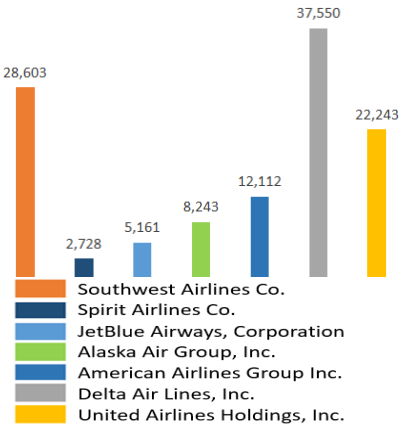

Figure 15: Market Capitalization (in millions $)
Source: Bloomberg (December 2019)

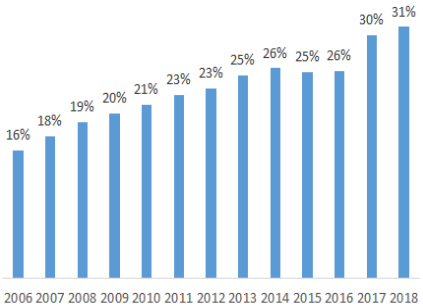

Figure 16: Market share of low-cost carriers
Source: Statista

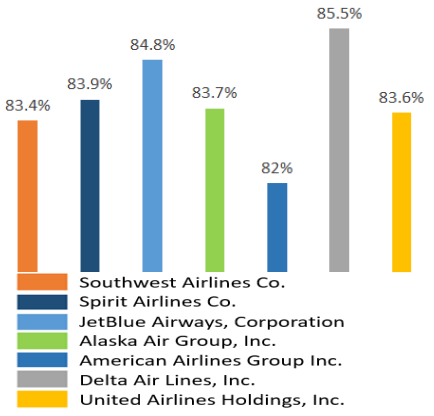

Figure 17: Load factor by company
Source: Annual Reports

Airways and Spirit Airlines have also registered a sales volume that allows them to position themselves as some of the largest airlines in North America, reaching market shares between 6.5% and 4%. Except for Spirit Airlines and JetBlue Airways, all these competitors also offer cargo services. Despite the different geographic positions of these key market players within the U.S., since Southwest Airlines Co. has many routes across the country it ends up facing intense competition from these airlines in those routes. Therefore, these airlines can be viewed as the main competitive peers of the company.

Regarding the operating activity of U.S. main airlines (Figure 14), it is noticeable that the three largest legacy carriers (Delta Air Lines, American Airlines Group and United Airlines) have significantly higher ASM and RPM than the competition. Southwest Airlines Co. was the most active low-cost carrier in 2018, with significantly higher ASM and RPM than Spirit Airlines or JetBlue Airways.

Simultaneously, the operations' size of each of these peers is intrinsically linked to their market capitalization. As of December 2019, Southwest Airlines Co. and the U.S.'s three largest legacy carriers had market capitalizations between $12 billion and $38 billion (Figure 15).

Among the low-cost segment, it is noteworthy that Southwest Airlines Co., when compared to other ultra-low-cost and low-cost airlines such as Spirit Airlines or JetBlue Airways, has a bigger market share. In an industry highly concentrated among the major airlines, the emergence of low-cost carriers has allowed intensifying price and cost pressure. According to *Statista* (Figure 16), low-cost carriers have been gaining more and more customers, increasing their market share from 16% in 2006 to 31% in 2018. The competitive advantage that supports the flourishing market share that low-cost airlines have in this industry is the fact that these airlines practice a no-frills service, ending up charging an extra for other commodities such as seat selection and onboard meals. This evolution presents a favorable future context for Southwest Airlines Co. and may indicate that the company will continue to capture customers of legacy carriers.

Regarding load factor, Southwest Airlines Co. is within the industry average (83.5%) in 2018, recording a value of 83.4%. All the company's main competitors have load factors over 80%, with Delta Air Lines having a load factor of over 85% (Figure 17).

Concerning passenger revenue yield per RPM, Southwest Airlines Co. has registered an amount of 15.34 cents per RPM. This figure represents the company's pricing policies, since this value is higher than the two ultra-low-cost airlines (Spirit Airlines and JetBlue Airways) and lower than the three major legacy carriers (Delta Air Lines, American Airlines and United Airlines), being

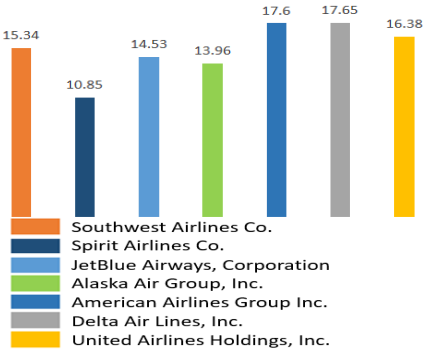

Figure 18: Passenger revenue yield per RPM by company (in cents)
Source: Annual Reports

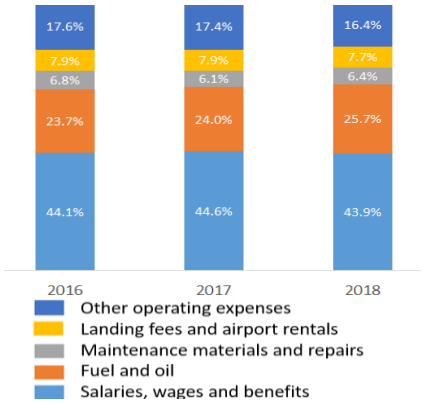

Figure 19: Cost structure by year – Southwest Airlines Co.
Source: Annual Reports

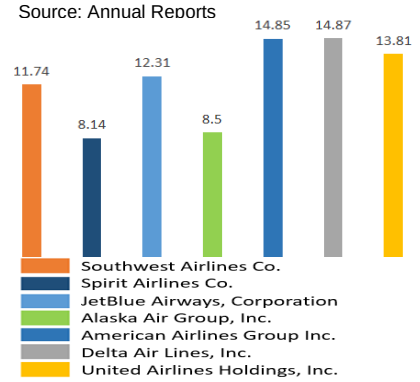

Figure 20: CASM by company (in cents)
Source: Annual Reports

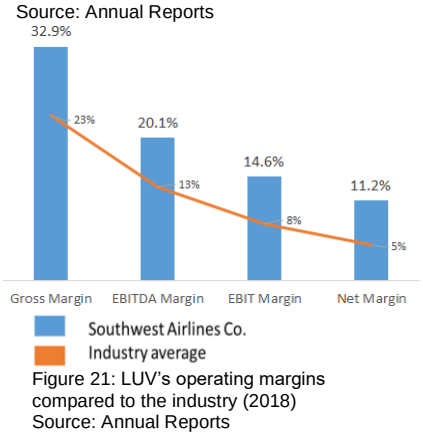

Figure 21: LUV's operating margins compared to the industry (2018)
Source: Annual Reports

Alaska Air Group the outlier as it is not a low-cost airline (Figure 18).

For the past three years, Southwest Airlines Co. has kept its cost structure stable (Figure 19). Similar to other airlines in the sector, the company's main costs are related to salaries, wages, and benefits, and fuel and oil, which together account for about 70% of the company's operating costs in 2018. Contrary to other costs (such as landing fees or maintenance costs) that can be controlled by the company's operating efficiency, fuel and salaries are operating costs that are invariably affected by the state of the economy. Hence, these costs are the main challenge to the company's cost management due to its size and unpredictability.

Compared to its peers, the company has one of the smallest CASMs in the market (Figure 20). In 2018, the company spent about 11.74 cents on operating expenses per ASM, only surpassed by Alaska Air Group (8.5 cents) and Spirit Airlines (8.14 cents), highlighting its main competitive advantage which allows the company to adopt a low-cost pricing policy. Consequently, Southwest Airlines Co. achieves a higher operating margin than its competitive peers (Figure 21). In 2018, the company achieved an EBITDA margin of 20.06%, which is higher than its peers' average by 7%, and a net margin of 11.22%.

Based on Southwest Airlines Co.'s competitive context, there can be identified some long-term industry trends. During the report, the impact of these trends in the company's key value drivers and costs forecast are quantified and it is assessed how they affect the company's valuation. These are:

1) Arising of low and ultra-low-cost carriers that can capture Southwest Airlines Co.'s customers and jeopardize the company's ability to capture revenues.
2) Passenger Yields evolving at a slower pace than inflation, putting pressure on Southwest Airlines Co. operating margins.
3) Airlines seek to improve operational (e.g. load factors and average seats per trip) and activity (e.g. RPM and ASM) measures, increasing revenues mostly by quantity rather than price.
4) Growing pressures on operating costs that are affected by exogenous measures, such as labor and fuel costs, which are the biggest drivers of airlines' operating margin decrease in the last few years[26].

Low-cost versus legacy carriers

The U.S.'s airline industry is composed of two different groups of airlines: low-cost and ultra-low-cost carriers (LCCs and ULCCs) and legacy carriers. While the

[26] Source: Reuters, 2019 (https://www.reuters.com/article/us-airlines-wages-inflation-analysis/higher-wages-fuel-prices-turn-up-cost-pressure-on-airlines-idUSKCN1FY292)

first group is characterized by having low fares, the second one usually provides a more premium service compared to the first one. To analyze the differences between both group's performances, two samples of four airlines are selected, which can be seen in Figure 22.

Low and ultra-low-cost carriers	Legacy carriers
Southwest Airlines Co.	United Airlines, Inc.
Spirit Airlines Inc.	American Airlines Group, Inc.
JetBlue Airways Corp.	Delta Air Lines, Inc.
Allegiant Travel Company (Allegiant Air)	Alaska Air Group, Inc.

Figure 22: Sample of Low-cost and ultra-low-cost carriers, and legacy carriers
Source: Equity Research Report

Regarding market volatility, it can be observed that both groups have similar levered betas (Figure 23). Moreover, the difference between the average betas of both groups (0.19) is due to the higher levered beta of American Airlines (1.61) as a result of its high level of indebtedness (241% of Net Debt / Market Cap as of January 2020). The median of both sample's betas reveals that the difference is about 0.1, concluding that there are no significant differences between samples.

In terms of revenue growth, there is a clear winner. The LCCs and ULCCs have been able to grow in the last few years at a faster pace, increasing 8.76% from 2015 to 2018, compared to 5.65% of legacy carriers, leading to a significant increase in market share for the LCCs and ULCCs. It is also observable that, among LCCs and ULCCs, some smaller players such as Spirit Airlines (15.77%) and Allegiant Travel Company (9.72%) registered higher revenue growth, confirming the arising of these emerging market players. Both groups also register a difference between the average ROIC since the LCCs and ULCCs group had a higher ROIC in 2018 when compared to the legacy carriers (Figure 23). However, this difference was justified by the ROIC of Southwest Co. (28.7%), which is confirmed by a similar median between both samples (nearly 9%), showing that there is not a significant difference between both groups.

Average	LCCs and ULCCs	Legacy Carriers
Levered Beta	1.10	1.29
CAGR of revenues (2015-2018)	8.76%	5.65%
EBITDA Margin	17.11%	13.29%
Fleet age (years)	9.98	12.75
ROIC	12.56%	10.31%

Figure 23: Comparison between Low-cost and ultra-low-cost carriers, and legacy carriers
Source: Equity Research Report

Concerning operational margins, LCCs and ULCCs group present a higher EBITDA margin compared to legacy carriers (Figure 23). However, within the first group sample, there is a great discrepancy between constituents (e.g. Southwest Airlines Co. has 20.06% and JetBlue Airways has 10.17% of EBITDA margin), being arguable that the low-cost pricing strategy is not directly correlated with operational efficiency. Since 2015, both groups are decreasing their EBITDA margin, with LCCs and ULCCs airlines decreasing 11.63% and legacy carriers decreasing 9.23%, confirming the increasing cost pressure in this industry. The operational efficiency between groups can be related to the fleet age, as the LCCs and ULCCs present, on average, a younger fleet (Figure 23).

Hence, it is observable that, although both groups are quite similar, there are better and worse performers independently of the pricing strategy, showing that being low-cost is not a guarantee of success. Moreover, there are examples of low-cost airlines that went bankrupt, such as WOW Air or Primera Air. Hence, it is plausible to assume that, despite Southwest Airlines Co.'s pricing strategy being a pillar in its success, it is sustained by the company's business model. In

addition to the company's low-cost strategy, the business model that drives this operational efficiency hinges in three pillars:

1) Effective cost management: As aforementioned in the "Competitive analysis" topic, Southwest Airlines Co. is one of the most cost-efficient airlines in the U.S., having a lower CASM than the industry's average and the highest EBITDA margin among competitors. To operationalize cost efficiency, the company has been modernizing and using a single fleet type to obtain fuel efficiency, getting additional capacity per airplane and reducing costs with pilots training (decreasing the costs per ASM). Compared to its competitors, the company has one of the youngest fleets (11.8 years) comparing to legacy carriers (12.75 years of sample's average), only being surpassed by Spirit Airlines (6.6 years), JetBlue Airways (9.2 years) and Alaska Air Group (8.9 years). The company's cost efficiency is also leveraged by the usage of secondary airports, with landing fees and airport rentals decreasing from 7.9% of total operating costs in 2016, to 7.7% in 2018.
2) Logistics efficiency: Southwest Airlines Co. uses a point-to-point system (where it transports directly to a destination avoiding traffic, rather than going through a central hub) instead of a hub and spoke system (where the transport goes to a central hub where passengers change modes of transport to reach their destination). This strategy allowed the company to save cash on expensive hangar spots at mega hubs as well as, reducing delays and turnaround times, having short-haul flights in a profitable way. According to *FlightStats*[27], in November 2019 the company registered an on-time arrival ratio of 85.18% (84.32% of industry's average). Also, the company registered an average delay of 41 minutes, being the fourth-best placed airline in the U.S. behind Spirit Airlines, Delta Air Lines and Hawaiian Airlines. The company can also obtain a turnaround time significantly lower than one of its main competitors such as American Airlines (30 minutes and 45 to 90 minutes, respectively[28]).
3) Organizational culture: The company is committed to cultivating an engaging organizational culture among employees. On average, Southwest Airlines Co.'s registered an employee tenure period of 11.5 years[29] which is higher than the leisure and hospitality segment (2.5 years) and transportation segment (3 years)[30]. The company's large tenure period helps in saving costs related to training. Also, nearly 87% of the company's employees

[27] Source: FlightStats, 2019 (https://www.flightstats.com/v2)
[28] Source: Azcentral, 2019 (https://eu.azcentral.com/story/travel/airlines/2019/05/14/how-long-it-takes-to-get-a-plane-ready-between-flights-airplane-turnaround-time/1123694001/)
[29] Source: Brunswick, 2019 (https://www.brunswickgroup.com/southwest-airlines-i6401)
[30] Source: BLS, 2018 (https://www.bls.gov/news.release/pdf/tenure.pdf)

belong to a Union[31], contributing to the employee's satisfaction.

The Texas-based airline has established itself as the world pioneer in the low-cost airline industry, having a business model that competitors will try to replicate. Currently, there are LCCs and ULCCs, such as Spirit Airlines or JetBlue Airways, trying to implement a similar business model based on lower operating costs and high operational efficiency. Moreover, there are legacy carriers introducing fares classes below the economy (e.g. American Airlines), increasing the price pressure on the industry. However, due to having a larger and more expensive route network, higher debt commitments due to their size, and wanting to preserve their premium image, it is not expected that legacy carriers will be able to replicate this model. Also, legacy carriers have more overhead costs associated with their fleet (such as reclining seats or the space between seats), which makes it difficult to get a competitive cost per seat when compared to Southwest Airlines Co. (and others LCCs and ULCCs[32]). Instead of directly competing with LCCs and ULCCs, some legacy carriers have tried to implement low-cost subsidiaries but most of them have failed[33].

Even though the current operating performance place Southwest Airlines Co. in a comfortable position, LCCs and ULCCs and the rising cost of labor and fuel will harm the company's competitive performance, dismantling the established oligopoly and testing the sustainability of Southwest Airlines Co.'s competitive advantages. Later in this report, some of the company's revenues drivers and costs will be forecasted and tested through sensitivity analyses to understand the evolution of its operating margins.

Business risks

Such as any other company in any industry, Southwest Airlines Co. is subject to macroeconomic shocks that may affect its turnover and cost management, as well as jeopardize its current competitive position in this market.

One of the key determinants of airline industry performance is the state of the economy. According to IATA (International Air Transport Association)[34], the airline industry is particularly sensitive to changes in economic conditions, which requires them to often adapt their competitive strategies to the state of the economy. Although the equity betas associated with the major market players in this industry do not show high volatility, as it will be shown in "Cost of capital"

[31] Source: Wired, 2019 (https://www.wired.com/2008/07/southwest-airlines-seven-secrets-for-success/)
[32] Source: Aerotime, 2018 (https://www.aerotime.aero/rytis.beresnevicius/23006-5-reasons-low-cost-carriers-make-money)
[33] Source: CAPA, 2009 (https://centreforaviation.com/analysis/reports/how-the-legacy-full-service-airlines-have-responded-to-rising-lcc-competition-14504)
[34] Source: IATA, 2019 (https://www.iata.org/publications/economics/Reports/chart-of-the-week/chart-of-the-week-8-Feb-2019.pdf)

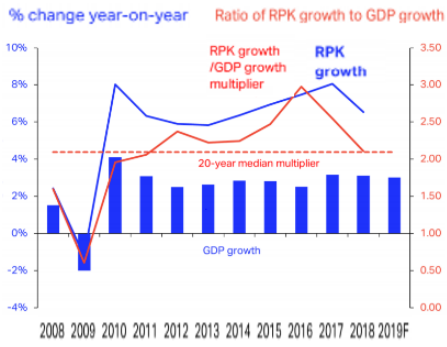

Figure 24: GDP growth vs RPK growth
Source: IATA

topic, IATA has identified, over the past 20 years, a high degree of correlation between miles flown and economic growth (Figure 24). Moreover, Southwest Airlines Co. also highlights, in its annual report, the U.S.'s economic conditions as the main determinant for the company's performance.

The second determinant identified by Southwest Airlines Co. as one of the biggest risk factors for the company's performance is fuel price. In fact, according to IATA, the correlation between economic growth and miles flown is only impaired when there is a large fluctuation in fuel price. At the end of 2018, fuel expenses represented about 25.7% of the company's operating costs, which represents a risk that could materially affect the company's operating result. To offset the effect of price fluctuations of this commodity on the company's financial performance, Southwest Airlines Co. uses fuel derivative instruments to hedge the short-term price volatility. However, this practice may not be able to offset large and long-term price fluctuations.

Labor relations can also be a key determinant of the financial performance of the company. The fact that Southwest Airlines Co. is part of a labor-intensive industry and that approximately 87% of its employees are represented by a labor union induces the company to be more careful when managing costs associated with its employees.

Later in this report, the influence of these three business risks is assessed and their impact on Southwest Airlines Co.'s share price is quantified through scenario and sensitivity analyses.

Forecast and valuation assumptions

Key value drivers forecast

Similarly, to other airlines in North America, Southwest Airlines Co. operates in different geographies and segments. To forecast the revenues of the company, they are split according to the operating segment (Passenger and Cargo) and geography (Latin America and Domestic). In 2018, the Passenger segment in North America was responsible for about 91% of revenues. To understand the evolution of the revenues of each operating segment of the company, the revenues are broken down by key value drivers that aim to demonstrate the link between the company's profitability and its key performance indicators.

Regarding the Passenger segment, revenues can be broken down into (Equation 1):

Equation 1: $$Passenger\ revenues = RPM * Revenue\ passenger\ yield\ per\ RPM =$$
$$= (Load\ Factor * Average\ seats\ per\ trip * Miles\ flown) *$$
$$Revenue\ passenger\ yield\ per\ RPM, \text{ for both regions}$$

In the case of Cargo segment, the following equation is used to calculate its revenues (Equation 2):

Equation 2: $Cargo\ revenues = Miles\ flown * Revenue\ cargo\ yield\ per\ mile$, for both regions

It is expected of total miles flown to be a key value driver of Cargo segment revenues as Southwest Airlines Co. uses the commercial aircraft to deliver freight[35].

The forecast of these key value drivers reflects the company's strategic positioning in the explicit horizon analyzed (from 2019 to 2024). Hence, the most important value drivers for forecasting the future profitability of the company are average seats per trip, miles flown, load factor, revenue passenger yield per RPM and cargo revenue yield per mile.

Regarding average seats per trip, Southwest Airlines Co. has the strategic goal of replacing the Boeing 737-700 (143 passengers) with the Boeing 737 MAX 8 (175 passengers) in the next few years. The Boeing 737 MAX 8 crisis led to an implementation delay throughout the year of 2019. However, the Boeing Max is expected to receive flying clearance by the FAA within the first quarter of 2020[36]. Hence, it is assumed that the trend of increasing average seats per trip will continue to be observable across the company's major competitors, as they all are already modernizing their fleets at a good pace. Therefore, it is assumed a 0.36% CAGR that reflects the FAA's (Federal Administration Aviation) forecast for the increase of seats per trip in the U.S. airline industry, during the explicit horizon[37]. As the company does not have flights between foreign destinations, it is used the same forecast for Latin America, assuming that the fleet will be the same as the one used in the domestic market.

In a concentrated market such as the U.S.'s airline industry and having a matured position in the market, it is not expected that Southwest Airlines Co. will be able to increase its flown miles per year exponentially. Moreover, the company already has routes throughout all the North American territory, only inaugurating new destinations sporadically. Hence, it is expected that Southwest Airlines Co. will increase its miles flown, as a result of changing consumer consumption patterns, that is, at the pace of the industry itself. As such, a CAGR of 1.47% is used which is based on the FAA's forecast[37] industry's growth rate (in terms of miles flown), assuming Southwest Airlines Co.'s activity will continue to grow at the industry's pace.

[35] Source: SupplyChainDive, 2018 (https://www.supplychaindive.com/news/southwest-airlines-cargo-expands-international-Mexico/528057/)
[36] Source: Southwest Airlines Co., 2020 (https://www.southwest.com/html/air/737-MAX-8.html?clk=737MAX8_190408)
[37] Source: Federal Aviation Administration, 2019 (https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2019-39_FAA_Aerospace_Forecast.pdf?fbclid=IwAR37QVsmjVeS0extOEnzjtJc9KW7UixlkhJM9QyT1mYANLWWzKnKrJLq6ck)

Although the company has already performed M&A activities (*e.g.* acquisition of AirTran in 2011), Southwest Airlines Co. focuses more on organically growing its operations. The company will likely continue its international expansion steadily, adding more international routes on an ongoing basis. Hence, it was computed a CAGR of 1.85% regarding the growth in miles flown in Latin America. This CAGR is based on the FAA's forecasted growth rate for this region[37], adding up the expected increase in miles flown due to the opening of new destinations which is expected to be consistent with the one planned between 2016 and 2020 in this region (average of 0.8 new destinations openings per year).

Regarding load factor, Southwest Airlines Co. has recorded a progressive increase in its load factor (80.3% in 2012 to 83.4% in 2018). Moreover, Southwest Airlines Co. has always recorded a ratio of over 80%, in line with the industry average, but not standing out in this measure of efficiency. The company has consistently evolved at the pace of the market, underlining the trend of maximizing efficiency measures in this industry. Hence, it is expected that, in the future, Southwest Airlines Co. will continue to evolve at the pace of the industry, being implausible an exponential growth of the load factor. To cope with it, the industry's average load factor, provided by the FAA[37], was used as a proxy for the load factor growth of Southwest Airlines Co., computing a CAGR of 0.1% in the explicit horizon. In Latin America, the company has been experiencing many fluctuations in its load factor, registering successive increases and decreases. With more penetration in this market, Southwest Airlines Co.'s load factor is expected to stabilize and be consistent with the market where the company is inserted. Hence, it was computed a CAGR of -0.09% in the explicit horizon, which accounts for the convergence of Southwest Airlines Co.'s load factor in Latin America with the industry's average (provided by the FAA).

Despite having a low-cost pricing strategy, Southwest Airlines Co. recorded increases in its passenger revenue yield per RPM between 2012 and 2014 (15.64 cents to 16.34 cents) and between 2016 and 2018 (15.28 cents to 15.34 cents), reporting a decrease between 2015 and 2016 which was justified by the change in accounting methodology. However, according to FAA forecasts, although passenger revenue yield per RPM increases in nominal terms, it will decrease in real terms in the explicit horizon. Also, it is expected that the company will not radically change its pricing policy, registering a nominal increase in its yield in the explicit horizon, in line with what happened in the historical period. Therefore, a revenue passenger yield per RPM CAGR of 1.16% and 1.17% in the explicit horizon, for the domestic and international markets, respectively, are computed based on the FAA's yield real growth forecast[37]

adjusted for inflation to convert it to nominal terms. According to a study named *World Air Cargo Forecast* by Boeing[38], the real freight yields are also expected to decrease as more efficient airplanes enter the market and competition increases. Therefore, it is predicted that the cargo revenue yield per mile CAGR will be a proportion of U.S. inflation (1.6% for both regions), due to the lack of recent forecasts for the explicit horizon in this segment.

It should be noted that the key-value driver's CAGRs mentioned earlier are relative to the normal state of the economy. Estimates regarding other scenarios will be addressed in the individual analyses.

Other Revenues segment is mainly related to website visits and the increase of flights booked over the internet. As both elements are intrinsically related to passenger revenues, it is expectable that this revenue segment will continue to grow according to the Passenger segment.

It is expected that in 2024 (the end of the explicit horizon) the revenues of the company will reach the $26.6 billion level, from which 93.1% are in the Passenger segment, 0.8% in the Cargo segment and the remaining 6.1% respectful to Other Revenues segment. After the explicit horizon, the revenues' growth rate will behave according to the U.S. and Latin America economy's growth. It is noticeable that passenger revenues' in North America will continue to be quite prominent in the company's revenues.

Overall forecasts

Currently, Southwest Airlines Co. has higher operating margins than its competitors. However, it is expectable that, due to high competition in this industry, the company's margin will decrease and converge to its peers' margin. Hence, the overall forecasts of the major BS (Balance Sheet) and IS (Income Statement) captions reflect the deterioration of profitability margins.

Regarding the salaries, wages, and benefits costs, the contractual wage rate has been increasing, leading to higher salaries expenses in 2018. The airline industry is going through a pilot shortage. Hence, pilots have seen their salaries and premiums increase[39]. Therefore, it is foreseeable for an increase in the average wages and salaries of flight-related personnel in the future, which should be higher than the historically verified, leading to a CAGR of 3.61% in the explicit horizon. This growth rate is aligned with recent wage increases in some of the

[38] Source: Boeing, 2018 (https://www.boeing.com/commercial/market/cargo-forecast/)
[39] Source: Forbes, 2018 (https://www.forbes.com/sites/marisagarcia/2018/07/27/a-perfect-storm-pilot-shortage-threatens-global-aviation-even-private-jets/#c4f2b8c15492)

largest players in the industry such as Delta Air Lines (4%[40]) and Southwest Airlines Co. itself (3%[41]). The salaries expenses of non-flight related employees are foreseen to grow but to a slower pace (1.7%), being this growth consistent with the historically verified. Southwest Airlines Co. was able to reduce the number of flight-related employees per ASM in the last few years, increasing it in 2017 and 2018. However, it is expected that Southwest Airlines Co. will increase this number, converging with the industry's average of employees per ASM in the long-term. Consequently, the estimated flight-related employees are 61,456 as of 2031. The weight of flight-related to non-flight related has been kept stable since 2013. Therefore, it is assumed to remain stable, leading to 12,594 non-flight related employees as of 2031.

Regarding fuel costs, it was directly computed the post-hedge cost, assuming that fuel hedging expenses in the future will have a similar weight to the historically verified - close to 5% - in relation to pre-hedge fuel expenses. Hence, post-hedge fuel costs are calculated according to the fuel prices and consumption forecast. FAA expects the price of fuel and oil to increase steadily in the foreseeable future, at a CAGR of 1.89% and 3.57% in the explicit horizon (2019–2024) and in the second stage (2025-2029), respectively[37]. The fuel consumption is dependent on the miles flown and the gallons consumed per mile. Nowadays aircraft are being gradually optimized to reduce this consumption. However, in the historical period, Southwest Airlines Co. presented a very fluctuating consumption per thousand miles (Figure 25). Therefore, it is assumed an average of the historical period. It is important to note that maintaining fuel consumption per thousand miles constant while increasing the number of available seats results in an increase in the available seat miles per fuel of gallon consumed. This increase in efficiency per seat is in line with the previously observed increase in Southwest Airlines Co. (ASM per fuel gallon consumed of 72.8 in 2014 and 76.3 in 2018[3]).

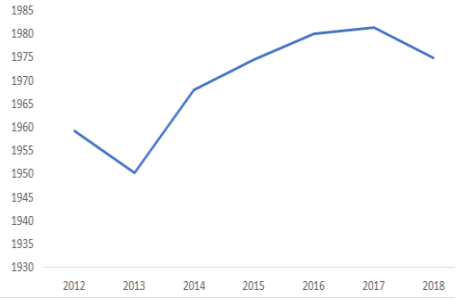

Figure 25: Gallons consumed per thousand miles – Southwest Airlines Co.
Source: Equity Research Report

Concerning maintenance costs, Southwest Airlines Co. had increased costs in the first two quarters of 2019 due to the recent groundings of the Boeing Max. However, it is forecasted that, in perpetuity, these costs will converge with the peers' costs due to the perspective of switching strategies from only having one type of aircraft and the modernization of aircraft, a trend that is common to the industry. Hence, it is assumed that the cost per ASM of Southwest Airlines Co. will converge with its peers in the long-term (0.78 cents per ASM), leading to a

[40] Source: The Business Journals, 2019 (https://www.bizjournals.com/atlanta/news/2019/09/04/delta-to-give-4-raise-to-employees.html)
[41] Source: Travel Pulse, 2019 (https://www.travelpulse.com/news/airlines/southwest-airlines-to-offer-mechanics-20-percent-pay-increase.html)

CAGR of -1.08% in the explicit horizon.

The costs associated with landing fees and airport rentals are intrinsically associated with the company's operations. In the historical period (2012 to 2018) these costs remained very constant per ASM, oscillating between 0.81 and 0.85 cents per ASM. As the company will maintain a short-haul flight strategy and will continue to operate at secondary airports, it is not expected that the cost per ASM to change significantly. Hence, it is used the average cost per ASM observed in the historical period (0.84 cents per ASM) as a cost driver for the forecasted period.

Such as the procedure elaborated concerning fuel costs, it was also directly computed the post-hedge interest costs. Interest expense is assumed to be a percentage of the previous year's debt. The cost of debt used was the one computed in the WACC calculation (2.86%), which will be addressed in the "Cost of capital" topic.

Regarding employee contribution plans expenses, Southwest Airlines Co. states in its annual report that contribution plans are primarily based on employee compensation and on the company's performance. Therefore, "Salaries, Wages and Benefits" caption is used as a cost-driver to associate this caption with increases in employee expenses arising from the course of the operations. This caption comprises almost all non-operating expenses.

PP&E (Property, plant, and equipment) represents most of the operating invested capital, being the key factor in the activity and success of the company. The PP&E contains flight equipment owned, ground property and equipment, assets constructed for others and deposits on flight equipment purchase contracts. These captions are calculated separately for the explicit horizon, during which, there is information available regarding the future Capex commitments provided by the company in its annual report.

Concerning deposits on flight equipment purchase contracts, future Capex commitments in Flight Equipment owned are used as a cost driver. This cost driver was chosen since Southwest Airlines Co. has kept the deposits on flight equipment stable, in relation to the Capex of flight equipment, throughout the past. This trend is observed within a period of five years, being aligned with the fact that Southwest Airlines Co. provides the future Capex commitments until 2024 and the period from order date to the delivery date of Boeing Co. is on average four to five years. After 2024 is assumed a constant percentage of PP&E net, due to lack of information regarding future orders.

After the explicit horizon, the PP&E caption (which comprises flight equipment, ground property and equipment, assets constructed for others, and deposits on

flight equipment) is projected based on the calculation of the annual Capex, net of depreciation. For this calculation, it is observed the annual historical investment of Southwest Airlines Co. in PP&E, which was, on average, 6.44% of previous year PP&E, net. To compute the perpetuity, the PP&E was calculated as a percentage of revenues after 2029.

Southwest Airlines Co. leases a part of its fleet. Airlines resort to this option to avoid the financial burden of buying airplanes. Both operational and financial leases net amounts are forecasted based on the future Capex commitments presented in the annual report of Southwest Airlines Co., during the explicit horizon. Also, airlines choose to lease aircraft to increase capacity temporarily. Therefore, after the explicit horizon, is assumed that the level of the net values will reflect the level of revenues. In this sense, revenues are used as a proxy for the level of activity, assuming that, if the level of activity increases, the number of airplanes leased will also increase as the company will need quickly adapt its capacity to demand. Concerning leases accounting recording, Southwest Airlines Co. must present these values in the balance sheet, both in assets and liabilities wise, according to the recent IFRS 16[42]. This change can impact the valuation in the sense that assets and financial liabilities will increase. Moreover, the EBITDA will also increase, as the costs associated with leases under IFRS 16 are interest costs and depreciation, while before were operating leases expenses. This is expected to increase the Operating Free Cash Flow and, consequently, the valuation. Also, this change in financial policy will increase Net Debt to Equity, increasing the target capital structure ratio of the company (and the industry) and lowering WACC. Hence, it is arguable that these two effects can lead to a higher EV (Enterprise Value). However, this increase can be offset by the increase in the net present value of Net Debt, which can lead to a similar Equity Value, varying on case by case basis.

Regarding the goodwill, it is forecasted that it will remain constant since it is not expected for Southwest Airlines Co. to rely on M&A activities to expand. Concerning the remaining intangible assets, such as domestic slots or gate leasehold rights, this is computed based on the estimated amortization values provided by Southwest Airlines Co. in its annual report, until 2024. After 2024, a turnover ratio is used to associate intangible assets with revenues. This approach is considered suitable because, in this industry, intangible assets are directly related to the operating activity and the turnover ratio of the company was quite stable in the historical period (between 2012 and 2018 this ratio oscillated between nearly 14 and 16). Hence, it is forecasted that this ratio will converge to

[42] Source: IFRS, 2019 (https://www.ifrs.org/issued-standards/list-of-standards/ifrs-16-leases/)

the average of the largest U.S. carriers (14.49), in the long-term.

Concerning the profit-sharing and saving plans, Southwest Airlines Co. states in its annual report that it contributes a percentage of its eligible pre-tax profits on an annual basis to profit-sharing plans. Therefore, is assumed that the pre-tax result is a good proxy for the evolution of this caption since this is a performance-based benefit plan.

Regarding short and long-term investments, it is expected Southwest Airlines Co. to maintain this financial buffer, generating a return and lowering the net cost of debt. From 2014 to 2018, this caption has been kept stable, fluctuating from 9.9% to 8.2% as a percentage of revenues throughout the period. Hence, it is expected that Southwest Airlines Co. will maintain this caption stable with revenues since it is expected that the company will invest more if it can generate more money through its operations.

ROIC, RONIC, RR and other performance ratios

Cost structures and operating margins change over time. Hence, the strategy used by Southwest Airlines Co. in the past to achieve this high operating margin may not be fruitful in the future. In a competitive industry, it is not feasible to maintain higher margins than its peers. In 2031 it is expected the EBITDA margin to be nearly 12%, compared to 20.06% in 2018. This is aligned with the biggest airlines in this industry, such as American Airlines and United Airlines which, in 2018, registered the lowest operating margins among the analyzed peers (10% and 13.4% of EBITDA margin, respectively) and also with the average of the analyzed peers (EBITDA margin of 13.2% in 2018). In contrast, other airlines were able to achieve a significantly higher EBITDA margin, such as Delta Air Lines (17.1%) or Spirit Airlines (15.9%). Regarding the Net Debt to Book Equity Ratio (excluding operating leases), it is forecasted a change in its capital structure from -6% in 2018 to 18% in 2031. This change in capital structure is convergent with the industry, although they still have a low level of indebtedness (Figure 26).

Companies	Net Debt / Equity (ex. leasings)
Southwest Airlines Co.	-6%
Spirit Airlines Inc.	56%
JetBlue Airways Corp.	17%
Alaska Air Group Inc.	23%
American Airlines Group Inc.	-17 319%
Delta Air Lines Inc.	108%
United Airlines Holdings Inc.	158%
Average (excluding AAL)	59%

Figure 26: Net Debt/Equity ratio (exc. Leasings) as of December of 2018
Source: Company's annual reports

Concerning the profitability of investment ratios, Southwest Airlines Co.'s presented high levels of operating ROIC (Return on Invest Capital) during the past period. In an industry that is competitive and without regulatory restraints, this high return level will entice competition via new entrants and reduction of margins by existing players. This will result in lower levels of RONIC (Return on New Invested Capital) over time, resulting in an overall lower ROIC. In the case of Southwest Airlines Co., it is observable that the operating ROIC is gradually converging to the WACC (Weight Average Cost of Capital), decreasing from 30% to 13% from 2019 to 2031. It is expected that, in the long-term, these values will

ROIC \ Reinvestment Rate	6.89%	10.89%	14.89%	18.89%	22.89%
7.87%	0.54%	0.86%	1.17%	1.49%	1.80%
9.34%	0.64%	1.02%	1.39%	1.76%	2.14%
11.07%	0.76%	1.21%	1.65%	2.09%	2.53%
13.13%	0.90%	1.43%	1.95%	2.48%	3.00%
14.52%	1.00%	1.58%	2.16%	2.74%	3.32%
16.06%	1.11%	1.75%	2.39%	3.03%	3.68%
17.76%	1.22%	1.93%	2.64%	3.35%	4.07%

Figure 27: Growth rate sensitivity analysis
Source: Equity Research Report

converge. Regarding the reinvestment rate, it decreased from 20% to 15% in 2019 and 2031, respectively. This decrease is intuitively associated with the lower attractiveness of investments, based on the decrease of ROIC. The computation of RONIC and RR led to a perpetual growth rate of nearly 2% in perpetuity. This perpetual growth rate is below the nominal economic growth of the U.S. forecasted for the perpetuity, highlighting the fact that the prices in this industry are forecasted to grow at a slower pace than inflation. To test the perpetual growth rate, a sensitivity analysis is conducted, varying both inputs between 7.87% to 17.76% and 6.89% to 22.89% respectively (Figure 27). The final sensitivity analysis varies the growth rate between 0.54% and 4.07%.

Cost of capital

It is used as a proxy for the risk-free rate the yield of the 10-year United States Government and it is chosen the annualized geometric return of the MSCI World Index as a proxy for the market return. In order to compute the market risk premium, these returns are computed based on weekly returns from 2012 to 2019 (the historical period observed). The annualized market risk premium of 5.99% is calculated through subtracting the average 10-year United States Government yield (2.31%) observed in the same period to the market return (8.30%).

Companies	Unlevered Beta
Southwest Airlines Co.	1.13
Spirit Airlines Inc.	0.65
JetBlue Airways Corp.	0.83
Alaska Air Group Inc.	0.92
American Airlines Group Inc.	0.80
Delta Air Lines Inc.	0.95
United Airlines Holdings Inc.	1.00
Industry Average (95% IC)	**1.00**

Companies that pertained to the 95% IC of Southwest Airlines Co. Unlevered Beta.

Figure 28: Unlevered Beta
Source: Equity Research Report

Concerning the cost of debt, a representative bond - both in size and in maturity - of Southwest Airlines Co. is chosen. This bond has maturity in 2026, amounts to $300 million and has a yield to maturity of 2.96%, being the highest debt issue in recent years. This bond has a credit rating of A3, according to Moody's. Based on the rating, the PD (Probability of Default) and the LGD (Loss Giving Default) are respectively 0.20% and 46.10%. The cost of debt is calculated by subtracting the product of LGD and PD to the YTM (Yield to Maturity). Hence, the cost of debt is 2.86%.

To calculate the levered beta of Southwest Airlines Co., the weekly returns of Southwest Airlines Co. and its peers are regressed over a period of four years (2015 to 2019) against the MSCI World Index. Then, the beta of debt of each company is computed using the respective cost of debt. The E/EV (Equity to Enterprise Value) ratio of each company, as of the December 2019, is used alongside the previously calculated inputs, leading to the unlevered beta of each peer.

For the calculation of the unlevered beta of the company, it is assumed the average of the unlevered betas of the peers with similar operational leverage, i.e. peers that pertain to the 95% confidence interval of Southwest Airlines Co.'s unlevered beta (Figure 28). This procedure led to an unlevered beta of 1.00.

Inputs	
Tax rate	21%
Risk free rate	1.95%
MRP	5.99%
Cost of Debt	2.86%
Beta of Equity	0.96 to 1.12
Cost of Equity	7.69% to 8.65%
Net Debt/ Equity	-5.01% to 13.91%
WACC	**7.87% to 7.97%**

Figure 29: WACC's inputs
Source: Equity Research Report

Perpetual G \ WACC	7.11%	7.49%	7.87%	8.44%	9.01%
0.54%	$ 56.98	$ 54.15	$ 51.66	$ 48.45	$ 45.75
1.01%	$ 59.70	$ 56.50	$ 53.70	$ 50.11	$ 47.12
1.40%	$ 62.32	$ 58.73	$ 55.62	$ 51.67	$ 48.40
1.95%	$ 66.66	$ 62.41	$ 58.76	$ 54.18	$ 50.43
2.15%	$ 68.47	$ 63.93	$ 60.04	$ 55.19	$ 51.25
2.83%	$ 75.87	$ 70.04	$ 65.15	$ 59.17	$ 54.41
4.07%	$ 97.88	$ 87.44	$ 79.18	$ 69.63	$ 62.42

Figure 30: Share price in DCF sensitivity analysis
Source: Equity Research Report

Rd \ Re	7.85%	8.25%	8.65%	9.25%	9.85%
2.26%	7.11%	7.46%	7.81%	8.34%	8.86%
2.46%	7.13%	7.48%	7.83%	8.36%	8.88%
2.66%	7.15%	7.50%	7.85%	8.38%	8.90%
2.86%	7.17%	7.52%	7.87%	8.40%	8.92%
3.16%	7.19%	7.55%	7.90%	8.42%	8.95%
3.46%	7.22%	7.57%	7.93%	8.45%	8.98%
3.76%	7.25%	7.60%	7.95%	8.48%	9.01%

Figure 31: WACC sensitivity analysis
Source: Equity Research Report

Afterward, the equity beta of Southwest Airlines Co. is computed relevering the company's unlevered beta (1.00), using a dynamic ratio of net debt to equity for each period. Likewise, the WACC is also calculated using a dynamic ratio of net debt to equity. This ratio is computed including leases and the market value of equity, being -2.86% in 2020 and 13.86% in 2031. Other WACC's inputs can be seen in Figure 29.

Valuation outputs

To calculate Southwest Airlines Co.'s EV is used the DCF valuation method. It is noteworthy to highlight that while computing the EV, the company's operations are valued by discounting its future cash flows, while the non-operating activities and the net debt of the company are valued using its book value.

In the computation of this method, the timeframe is split into two stages: the explicit horizon where it is better described the company's strategic positioning and financial performance (2019 until 2024) and the second stage where the company's cash flows growth will follow the U.S. economy growth (2025 until 2029). Afterward, it is used the growth rate aforementioned in the "ROIC, RONIC, RR and other performance ratios" topic of nearly 2% to compute the perpetuity.

Regarding the DCF methodology is important to note that, instead of choosing a fixed capital structure for Southwest Airlines Co., the operating cash flows of the company are discounted at a WACC that is constantly relevered according to the D/E ratio recorded each year. This method yields a terminal value of $39.8 billion, which results in a share price of $58.76. The share price calculated by this valuation method is a consequence of the discount of the statistically expected cash flows that are derived from the scenario analysis. This analysis will be further explained in the individual analyses.

To understand the effect that the discount factor and the perpetual growth have on share price, sensitivity analyses are performed to the main inputs of the valuation: the cost of capital and the perpetual growth rate. When computing these sensitivity analyses, the WACC is varied between 7.11% and 9.01% and the perpetual growth rate is varied between 0.54% and 4.07%. This results in a share price range between $45.75 and $97.88 in the DCF valuation method (Figure 30). In addition to the aforementioned sensitivity analyses, other sensitivity analyses are performed to understand the suitable range of values for the WACC and the perpetual growth rate. Hence, the WACC is varied based on the levered cost of capital (Re) and the cost of debt (Rd) (Figure 31). The sensitivity analysis of the perpetual growth rate is focused on the relationship between RONIC and RR and was further analyzed in the "ROIC, RONIC, RR and

other performance ratios" topic (Figure 27).

Forward Multiples FY20			
Peers	EV/SALES	EV/EBITDA	EV/EBIT
Southwest Airlines	1.2	7.2	11.3
Spirit Airlines	1.1	6.5	9.7
JetBlue Airways	0.8	4.4	7.1
Alaska Air Group	1.1	6.0	8.3
American Airlines	0.9	10.4	10.8
Delta Air Lines	1.1	8.3	8.4
United Airlines	0.8	8.1	8.5
Median	1.07	7.24	8.50
Share price	49.43	56.74	43.19

Figure 32: Forward multiples valuation (FY20)
Source: Bloomberg and Equity Research Report

Multiples valuation

The goal of the valuation through multiples is to test the results of the aforementioned valuation method, while comparing Southwest Airlines Co.'s key performance ratios with its peer competitive group. The multiples analyzed are EV/Sales, EV/EBITDA and EV/EBIT.

Forward multiples tend to have a lower variation between peers and empirical evidence shows that forward multiples are more accurate predictors of value than historical multiples[43]. In the forward multiple valuation (FY2020), Southwest Airlines Co. share price range from $43.19 to $56.74 (Figure 32). It is observable that, within this sample, JetBlue Airways and American Airlines have more dispersion when compared to other airlines. Regarding JetBlue Airways, the company presents forward multiples below the median that may be justified by Blomberg analysts' forecast of an increase in sales of 13% and 8% in EBITDA margin in 2020 compared to 2018. Concerning American Airlines, the company presents forward multiples above the median that may be justified by the deterioration of EBITDA margins forecasted by the Bloomberg analysts (16% in 2016 and 8.27% in 2020).

As observed in Figure 33, the share value based on the multiple valuation of FY2020 is lower than the yielded from the DCF valuation method. However, regarding EV/EBITDA multiple, it is noticeable that it yielded an accurate result.

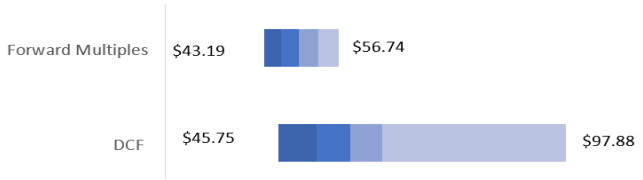

Figure 33: Football field – DCF and Multiples Valuation
Source: Equity Research Report

According to United Airlines' CEO, Doug Parker, the airline sector is undervalued[44]. Airline stocks continue to trade on EV/EBITDA ratios below both the Industrials sector and the S&P 500 Index (6.54x[45] versus 11.9x[46] and 12.98x[47], respectively, as of 2018). One of the reasons for the low multiples in this industry is the risk associated with the airline industry. This industry is perceived by the effect of past events as, for instance, multiple Chapter 11's and

[43] Source: McKinsey. 2016. *Valuation, measuring and managing the value of companies (6th Edition)*. New York: John Wiley & Sons
[44] Source: US global etfs, 2016 (https://www.usglobaletfs.com/insights/we-believe-airline-stocks-are-undervalued/
[45] Source: Equidam, 2018 (https://www.equidam.com/ebitda-multiples-trbc-industries/)
[46] Source: Siblis Research, 2018 (http://siblisresearch.com/data/ev-ebitda-multiple/?fbclid=IwAR3-ONCVOYdn3d1cVKHC4VD3zq5DgIY3bbS9tjIRrPGngPRkwxwqgnd-YFY)
[47] Source: Investopedia, 2018 (https://www.investopedia.com/ask/answers/072715/what-considered-healthy-evebitda.asp)

Chapter 7's that occurred due to the economic crisis and the rise of fuel prices.

Sensitivity and scenario analysis

With the purpose of testing some key contingencies that affect Southwest Airlines Co.'s share price, some tests are performed to understand how it will be affected by the uncertainties surrounding the future of the airline industry.

First, it is performed a scenario analysis to understand how the company's key value drivers and operating margins will be affected by one of the industry's main business risks: the state of the economy. Hence, a scenario analysis is performed to calculate a statistically expected share price. This analysis results in a statistically expected share price of $58.76 in the DCF valuation method. This scenario analysis will be addressed in the individual analyses.

Cost of Oil per Gallon	Consumption per thousand Miles: 1,701	1,879	1,978	1,993	2,009
3.47	$ 57.26	$ 46.54	$ 40.58	$ 39.65	$ 38.71
3.29	$ 62.76	$ 52.62	$ 46.98	$ 46.09	$ 45.20
3.12	$ 67.97	$ 58.37	$ 53.03	$ 52.19	$ 51.35
2.96	$ 72.89	$ 63.81	$ 58.76	$ 57.97	$ 57.17
2.73	$ 79.50	$ 71.10	$ 66.43	$ 65.70	$ 64.97
2.52	$ 85.60	$ 77.84	$ 73.53	$ 72.85	$ 72.17
2.32	$ 91.24	$ 84.07	$ 80.08	$ 79.46	$ 78.83

Figure 34: Fuel cost sensitivity analysis
Source: Equity Research Report

Nº of Employees	Average Employee Cost per year (in dollars): 138,149	142,421	146,826	151,231	155,768
79,373	$ 54.77	$ 50.27	$ 45.62	$ 40.98	$ 36.20
77,061	$ 59.01	$ 54.64	$ 50.13	$ 45.62	$ 40.98
74,816	$ 63.13	$ 58.89	$ 54.51	$ 50.13	$ 45.62
72,637	$ 67.13	$ 63.01	$ 58.76	$ 54.51	$ 50.13
69,005	$ 73.80	$ 69.88	$ 65.84	$ 61.80	$ 57.64
65,555	$ 80.13	$ 76.41	$ 72.57	$ 68.73	$ 64.78
62,277	$ 86.14	$ 82.61	$ 78.96	$ 75.32	$ 71.57

Figure 35: Employees cost sensitivity analysis
Source: Equity Research Report

In addition to the sensitivity analysis computed for the various components that constitute the cost of capital, sensitivity analyses of key performance factors of Southwest Airlines Co's cost structure are also developed. These sensitivity analyses focus on the two main costs of the company: the cost of fuel and the cost of salaries, wages, and benefits. It should be noted that each of these sensitivity analyses is intended solely to understand the variation of these costs in perpetuity.

Concerning the sensitivity analysis of fuel cost, it is varied according to its cost (cost of fuel per gallon) and its consumption efficiency (consumption per thousand miles). In this sensitivity analysis, the variation in fuel costs is only reflected in the operating costs of the company and not in the fares charged to customers. Hence, it is found that the share price varies between $38.71 and $91.24 (Figure 34). Further details on this sensitivity analysis are given in the individual analyses.

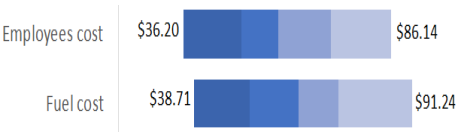

Figure 36: Football field – Fuel cost and Salaries, wages and Benefits cost
Source: Equity Research Report

Regarding the cost of salaries, wages, and benefits, the elaborated sensitivity analysis is similar to the one previously described. The number of employees that the company needs to operate is varied, highlighting the operational efficiency, but also the workforce cost per ASM, reflecting the labor market conditions. From this sensitivity analysis, it is observed that the share price varies between $36.20 and $86.14 (Figure 35). It is important to note that the salary costs are presented at current prices since the cash flows are presented in nominal terms. These sensitivity analyses are summarized in Figure 36, demonstrating the major influence that these two costs have on the share price.

Appendixes

Appendix 1 – Income Statement

(in millions of dollars, except share amount)	2016	2017	2018	2019 (E)	2020 (F)	2021 (F)	2022 (F)	2023 (F)	2024 (F)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)
Operating Revenues																
Passenger	19 068	19 763	20 455	21 120	21 808	22 519	23 255	24 016	24 803	25 624	26 358	27 054	27 707	28 312	28 865	29 429
Freight	171	173	175	181	187	193	199	206	213	220	226	232	238	243	248	253
Other Revenues	1 050	1 210	1 335	1 378	1 423	1 470	1 518	1 567	1 619	1 672	1 720	1 766	1 808	1 848	1 884	1 921
Total Operating Revenues	20 289	21 146	21 965	22 679	23 418	24 182	24 972	25 789	26 634	27 516	28 304	29 052	29 753	30 403	30 997	31 603
Operating Expenses																
Salaries, wages, and benefits	(6 786)	(7 305)	(7 649)	(8 122)	(8 587)	(9 103)	(9 637)	(10 204)	(10 804)	(11 162)	(11 482)	(11 785)	(12 069)	(12 333)	(12 574)	(12 820)
Fuel and oil	(3 801)	(4 076)	(4 616)	(5 109)	(5 345)	(5 594)	(5 855)	(6 130)	(6 418)	(6 345)	(6 640)	(6 933)	(7 222)	(7 506)	(7 652)	(7 802)
Maintenance materials and repairs	(1 045)	(1 001)	(1 107)	(1 338)	(1 351)	(1 364)	(1 377)	(1 391)	(1 404)	(1 451)	(1 492)	(1 532)	(1 569)	(1 603)	(1 634)	(1 666)
Aircraft Rentals	(229)	(198)	(161)													
Landing fees and airport rentals	(1 211)	(1 292)	(1 334)	(1 363)	(1 392)	(1 420)	(1 450)	(1 480)	(1 511)	(1 607)	(1 653)	(1 697)	(1 738)	(1 776)	(1 811)	(1 846)
Depreciation and amortization	(1 221)	(1 218)	(1 201)	(1 419)	(1 435)	(1 516)	(1 467)	(1 601)	(1 652)	(1 696)	(1 803)	(1 916)	(2 035)	(2 162)	(2 204)	(2 247)
Acquisition and integration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other operating expenses	(2 474)	(2 649)	(2 691)	(2 653)	(2 740)	(2 829)	(2 922)	(3 017)	(3 116)	(3 219)	(3 312)	(3 399)	(3 481)	(3 557)	(3 627)	(3 698)
Total Operating Expenses	(16 767)	(17 739)	(18 759)	(20 005)	(20 850)	(21 826)	(22 708)	(23 822)	(24 907)	(25 482)	(26 382)	(27 261)	(28 114)	(28 937)	(29 502)	(30 079)
Operating Income /EBIT	**3 522**	**3 407**	**3 206**	**2 675**	**2 568**	**2 356**	**2 264**	**1 967**	**1 728**	**2 035**	**1 922**	**1 790**	**1 638**	**1 466**	**1 495**	**1 524**
Other Expenses/Income																
Interest expense	(122)	(114)	(131)	(233)	(223)	(237)	(212)	(247)	(261)	(288)	(321)	(357)	(397)	(441)	(450)	(458)
Capitalized interest	47	49	38	23	26	30	33	38	42	44	46	49	52	56	57	58
Interest income	24	35	69	76	82	84	87	90	93	96	99	101	104	106	108	110
Other gains (losses), net	(21)	(112)	(18)	(107)	(99)	(101)	(103)	(104)	(106)	(110)	(113)	(116)	(119)	(121)	(124)	(126)
Total other (expenses) income	**(72)**	**(142)**	**(42)**	**(241)**	**(215)**	**(224)**	**(194)**	**(224)**	**(233)**	**(258)**	**(289)**	**(322)**	**(360)**	**(401)**	**(408)**	**(416)**
Income before income taxes/EBT	**3 450**	**3 265**	**3 164**	**2 434**	**2 353**	**2 132**	**2 070**	**1 743**	**1 495**	**1 776**	**1 634**	**1 468**	**1 279**	**1 065**	**1 086**	**1 108**
% of EBITDA Margin	23.38%	21.87%	20.06%	18.05%	17.09%	16.01%	14.94%	13.83%	12.69%	13.56%	13.16%	12.76%	12.35%	11.93%	11.93%	11.93%
% of EBIT Margin	17.36%	16.11%	14.60%	11.79%	10.97%	9.74%	9.07%	7.63%	6.49%	7.39%	6.79%	6.16%	5.51%	4.82%	4.82%	4.82%
Provision/Benefit for Income Taxes	(1 267)	92	(699)	(540)	(523)	(476)	(462)	(392)	(339)	(401)	(370)	(335)	(294)	(249)	(228)	(233)
Net Income	**2 183**	**3 357**	**2 465**	**1 894**	**1 830**	**1 656**	**1 607**	**1 351**	**1 156**	**1 376**	**1 263**	**1 133**	**984**	**817**	**858**	**875**
% of Net Margin	10.76%	15.88%	11.22%	8.35%	7.81%	6.85%	6.44%	5.24%	4.34%	5.00%	4.46%	3.90%	3.31%	2.69%	2.77%	2.77%

Appendix 2 – Balance Sheet

(in millions of dollars, except share data)	2016	2017	2018	2019 (F)	2020 (F)	2021 (F)	2022 (F)	2023 (F)	2024 (F)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)
Current assets:																
Cash and cash equivalents	1379	1480	1854	856	884	913	942	973	1005	1038	1068	1096	1123	1147	1170	1193
Accounts and other receivables	546	662	568	601	635	671	710	751	794	840	885	930	975	1021	1041	1061
Inventories of parts and supplies, at cost	337	420	461	482	504	527	551	576	602	630	656	681	707	731	745	760
Prepaid expenses and other current asset	387	439	328	334	342	351	358	375	388	401	412	423	433	443	452	460
Total current assets	**2 649**	**3 001**	**3 211**	**2 273**	**2 365**	**2 462**	**2 562**	**2 675**	**2 789**	**2 909**	**3 021**	**3 131**	**3 238**	**3 342**	**3 407**	**3 474**
Non-current assets:																
PP&E	17 044	18 539	19 525	19 656	20 168	21 466	20 990	22 962	23 834	25 283	26 811	28 427	30 137	31 948	32 573	33 209
Intangible	1396	1383	1370	1311	1285	1285	1285	1285	1382	1511	1646	1789	1940	2 099	2 140	2 181
Other assets	301	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total noncurrent assets	**18 741**	**19 937**	**20 895**	**20 967**	**21 453**	**22 751**	**22 276**	**24 247**	**25 216**	**26 795**	**28 457**	**30 216**	**32 077**	**34 047**	**34 712**	**35 391**
Short and long-term investments	1763	1939	1999	2 095	2 118	2 187	2 258	2 332	2 409	2 488	2 560	2 627	2 691	2 749	2 803	2 858
Fuel derivative contracts (current and non	133	233	138	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Assets	**23 286**	**25 110**	**26 243**	**25 335**	**25 936**	**27 400**	**27 095**	**29 254**	**30 414**	**32 192**	**34 037**	**35 974**	**38 006**	**40 138**	**40 923**	**41 722**
Current liabilities:																
Accounts payable	1178	1320	1416	1394	1389	1376	1363	1350	1337	1325	1307	1287	1264	1239	1263	1288
Accrued liabilities	871	990	1064	985	1068	1123	1181	1241	1305	1349	1387	1424	1458	1490	1519	1549
Air traffic liability	3 115	3 495	4 134	3 833	3 958	4 087	4 220	4 359	4 501	4 650	4 784	4 910	5 028	5 138	5 239	5 341
Total current liabilities	**5 164**	**5 805**	**6 614**	**6 212**	**6 415**	**6 586**	**6 764**	**6 950**	**7 144**	**7 324**	**7 478**	**7 621**	**7 751**	**7 868**	**8 021**	**8 178**
Noncurrent liabilities:																
Capital Leases	180	125	85	83	81	80	77	87	90	93	96	98	101	103	105	107
Air traffic liability	-	1070	936	966	998	1030	1064	1099	1135	1173	1206	1238	1268	1296	1321	1347
Deferred income taxes	3 374	2 119	2 427	2 482	2 491	2 671	2 527	2 817	2 909	3 096	3 296	3 508	3 734	3 974	4 052	4 131
Construction obligation	1078	1390	1701	37	82	166	199	286	306	326	347	369	393	418	426	435
Operating lease liabilities	-	-	-	1346	1487	1539	1571	1565	1617	1670	1718	1763	1806	1845	1881	1918
Other noncurrent liabilities	1504	1291	1250	1088	1102	1096	1114	1094	1086	1167	1165	1158	1145	1127	1148	1169
Total noncurrent liabilities:	**6 136**	**5 995**	**6 399**	**6 003**	**6 241**	**6 584**	**6 553**	**6 948**	**7 144**	**7 526**	**7 828**	**8 134**	**8 446**	**8 763**	**8 933**	**9 107**
Short and long-term debt	3 387	3 668	3 377	2 636	2 189	2 587	1602	2 728	3 108	3 861	4 821	5 919	7 165	8 570	8 723	8 879
Fuel derivative contracts (current and non	158	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total liabilities	**14 845**	**15 469**	**16 390**	**14 851**	**14 845**	**15 756**	**14 919**	**16 625**	**17 396**	**18 711**	**20 127**	**21 674**	**23 362**	**25 201**	**25 678**	**26 164**
Stockholders' equity:	8 441	9 641	9 853	10 483	11 091	11 643	12 177	12 629	13 018	13 481	13 911	14 300	14 644	14 938	15 245	15 558
Total stockholders' equity	**8 441**	**9 641**	**9 853**	**10 483**	**11 091**	**11 643**	**12 177**	**12 629**	**13 018**	**13 481**	**13 911**	**14 300**	**14 644**	**14 938**	**15 245**	**15 558**
Total liabilities and stockholders'	**23 286**	**25 110**	**26 243**	**25 335**	**25 936**	**27 400**	**27 095**	**29 254**	**30 414**	**32 192**	**34 037**	**35 974**	**38 006**	**40 138**	**40 923**	**41 722**

Appendix 3 – Cash Flows Map

(in millions of dollars, except share amount)	2016	2017	2018	2019 (E)	2020 (F)	2021 (F)	2022 (F)	2023 (F)	2024 (F)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)
NOPLAT - Recurrent	3 124	4 368	3 592	3 047	3 018	2 907	2 889	2 730	2 610	2 892	2 842	2 774	2 689	2 585	2 661	2 713
NOPLAT - Non Recurrent	(14)	(41)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Depreciations and Amortizations	(1 143)	(1 097)	(1 033)	(1 289)	(1 307)	(1 387)	(1 342)	(1 459)	(1 505)	(1 544)	(1 646)	(1 755)	(1 870)	(1 992)	(2 031)	(2 071)
Operating Gross Free Cash Flow	**4 254**	**5 424**	**4 625**	**4 336**	**4 325**	**4 295**	**4 231**	**4 189**	**4 115**	**4 437**	**4 488**	**4 529**	**4 558**	**4 577**	**4 692**	**4 784**
Δ Investments in NWC	(82)	344	327	(490)	108	74	76	79	83	63	44	35	25	15	90	92
Δ Investment in Capex	(1 815)	(2 093)	(1 827)	(1 627)	(1 630)	(2 556)	(839)	(3 228)	(2 363)	(3 013)	(3 206)	(3 414)	(3 635)	(3 870)	(2 628)	(2 679)
Δ Investment in Net Other Operating Assets	1 559	241	220	225	54	229	(94)	342	147	236	243	253	264	276	110	112
Total Operating Investments	**(338)**	**(1 508)**	**(680)**	**(1 892)**	**(1 467)**	**(2 253)**	**(857)**	**(2 807)**	**(2 133)**	**(2 715)**	**(2 920)**	**(3 127)**	**(3 346)**	**(3 579)**	**(2 427)**	**(2 475)**
Operating Free Cash Flow	**3 916**	**3 915**	**3 945**	**2 444**	**2 858**	**2 041**	**3 374**	**1 381**	**1 982**	**1 722**	**1 568**	**1 402**	**1 212**	**998**	**2 265**	**2 309**
Non-Operating Profits after tax	(625)	(670)	(799)	(868)	(919)	(976)	(1 033)	(1 095)	(1 160)	(1 198)	(1 233)	(1 266)	(1 297)	(1 325)	(1 351)	(1 377)
Depreciations and Amortizations	(25)	(31)	(36)	(1)	(2)	(4)	(4)	(6)	(7)	(7)	(8)	(8)	(9)	(9)	(10)	(10)
Non-Operating Gross Free Cash Flow	**(600)**	**(639)**	**(763)**	**(868)**	**(917)**	**(972)**	**(1 029)**	**(1 089)**	**(1 153)**	**(1 191)**	**(1 225)**	**(1 257)**	**(1 288)**	**(1 316)**	**(1 341)**	**(1 368)**
Δ Pension, post-retirment and related benefits	22	(44)	10	(86)	(1)	(26)	5	(44)	(28)	65	(17)	(22)	(27)	(32)	12	12
Δ Other Non-Operating Invested Capital	153	81	357	(1 729)	45	89	30	94	23	24	26	28	29	31	10	10
Δ Investment in Capex	(323)	(323)	(225)	1 599	(50)	(91)	(39)	(96)	(28)	(28)	(30)	(31)	(33)	(36)	(18)	(18)
Non-Operating Free Cash Flow	**(748)**	**(925)**	**(621)**	**(1 084)**	**(923)**	**(1 000)**	**(1 033)**	**(1 136)**	**(1 187)**	**(1 129)**	**(1 246)**	**(1 283)**	**(1 319)**	**(1 352)**	**(1 338)**	**(1 364)**
Total Free Cash Flow	**3 168**	**2 990**	**3 325**	**1 360**	**1 936**	**1 041**	**2 341**	**246**	**795**	**593**	**323**	**119**	**(107)**	**(354)**	**927**	**945**
Net Financial Profit After Tax	(302)	(300)	(329)	(285)	(270)	(276)	(248)	(283)	(295)	(318)	(346)	(375)	(408)	(443)	(451)	(460)
Depreciations and Amortizations	(53)	(90)	(132)	(130)	(126)	(125)	(120)	(135)	(140)	(145)	(149)	(153)	(157)	(160)	(163)	(166)
Financial Gross Free Cash Flow	**(249)**	**(210)**	**(197)**	**(156)**	**(143)**	**(151)**	**(128)**	**(148)**	**(154)**	**(174)**	**(197)**	**(222)**	**(251)**	**(283)**	**(288)**	**(294)**
Δ Changes in Excess Cash	(613)	(69)	(343)	1 025	-	-	-	-	-	-	-	-	-	-	-	-
Δ Changes in Marketable Securities and Leases	(718)	(531)	(215)	(225)	(124)	(184)	(154)	(324)	(255)	(260)	(252)	(250)	(248)	(245)	(241)	(245)
Δ Changes in Financial Debt	209	281	(291)	(741)	(446)	397	(984)	1 126	381	753	960	1 097	1 246	1 406	153	156
Debt Financing Cash Flow	**(1 372)**	**(528)**	**(1 046)**	**(97)**	**(714)**	**63**	**(1 267)**	**653**	**(29)**	**319**	**511**	**625**	**747**	**878**	**(376)**	**(383)**
Net Cash Transactions with Shareholders (correc	(1 796)	(2 462)	(2 279)	(1 263)	(1 222)	(1 104)	(1 074)	(899)	(767)	(912)	(834)	(743)	(640)	(523)	(551)	(562)
Equity Financing Cash Flow	**(1 796)**	**(2 462)**	**(2 279)**	**(1 263)**	**(1 222)**	**(1 104)**	**(1 074)**	**(899)**	**(767)**	**(912)**	**(834)**	**(743)**	**(640)**	**(523)**	**(551)**	**(562)**
Financing FCF	**(3 168)**	**(2 990)**	**(3 325)**	**(1 360)**	**(1 936)**	**(1 041)**	**(2 341)**	**(246)**	**(795)**	**(593)**	**(323)**	**(119)**	**107**	**354**	**(927)**	**(945)**

Appendix 4 – Value Drivers projections

Passenger

(in millions of dollars)	2016	2017	2018	2019 (E)	2020 (F)	2021 (F)	2022 (F)	2023 (F)	2024 (F)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)
Domestic	**18 691**	**19 280**	**19 896**	**20 517**	**21 158**	**21 819**	**22 500**	**23 202**	**23 927**	**24 626**	**25 298**	**25 938**	**26 543**	**27 109**	**27 639**	**28 179**
Revenue Passenger Miles (RPM) (000's) (miles)	121 082 048	124 624 378	128 552 266	131 040 066	133 576 010	136 161 032	138 796 080	141 482 122	144 220 146	146 235 681	147 935 015	149 487 725	150 704 800	151 638 725	152 308 716	152 981 667
Available Seat Mile (ASM) (000's) (miles)	143 953 402	148 255 637	154 016 145	156 844 248	159 724 282	162 657 200	165 643 973	168 685 590	171 783 059	174 023 146	175 954 353	177 565 148	178 845 716	179 788 059	180 415 872	181 045 877
Miles Flown (000's) (miles)	977 081	994 804	1 022 005	1 037 016	1 052 248	1 067 703	1 083 386	1 099 299	1 115 445	1 126 939	1 136 368	1 143 674	1 148 810	1 151 744	1 152 645	1 153 546
Average seats per trip	147.33	149.03	150.70	151.25	151.79	152.34	152.89	153.45	154.00	154.42	154.84	155.26	155.68	156.10	156.52	156.95
Load Factor (percentage)	84.11%	84.06%	83.47%	83.55%	83.63%	83.71%	83.79%	83.87%	83.95%	84.03%	84.11%	84.19%	84.27%	84.34%	84.42%	84.50%
Passenger revenue yield per RPM (cents)	15.44	15.47	15.48	15.66	15.84	16.02	16.21	16.40	16.59	16.84	17.09	17.35	17.61	17.88	18.15	18.42
International/Latin America	**377**	**483**	**559**	**613**	**670**	**730**	**793**	**860**	**931**	**998**	**1 060**	**1 116**	**1 164**	**1 203**	**1 226**	**1 250**
Revenue Passenger Miles (RPM) (000's) (miles)	3 715 938	4 417 042	4 770 056	5 171 391	5 587 651	6 019 290	6 466 774	6 930 583	7 411 208	7 850 311	8 240 103	8 570 180	8 831 244	9 015 520	9 081 147	9 147 252
Available Seat Mile (ASM) (000's) (miles)	4 568 649	5 555 435	5 779 008	6 270 830	6 781 640	7 312 041	7 862 649	8 434 100	9 027 049	9 561 889	10 036 666	10 438 709	10 756 692	10 981 144	11 061 080	11 141 598
Miles Flown (000's) (miles)	31 010	37 277	38 348	41 461	44 677	47 997	51 425	54 964	58 616	61 921	64 820	67 234	69 095	70 347	70 667	70 989
Average seats per trip	147.33	149.03	150.70	151.25	151.79	152.34	152.89	153.45	154.00	154.42	154.84	155.26	155.68	156.10	156.52	156.95
Load Factor (percentage)	81.34%	79.51%	82.54%	82.47%	82.39%	82.32%	82.25%	82.17%	82.10%	82.10%	82.10%	82.10%	82.10%	82.10%	82.10%	82.10%
Passenger revenue yield per RPM (cents)	10.14	10.93	11.71	11.85	11.99	12.13	12.27	12.41	12.56	12.71	12.86	13.02	13.18	13.34	13.50	13.67
Passenger Revenues	**19 068**	**19 763**	**20 455**	**21 130**	**21 828**	**22 549**	**23 293**	**24 062**	**24 857**	**25 624**	**26 358**	**27 054**	**27 707**	**28 312**	**28 865**	**29 429**

Freight

(in millions of dollars)	2016	2017	2018	2019 (E)	2020 (F)	2021 (F)	2022 (F)	2023 (F)	2024 (F)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)	2030 (F)	2031 (F)
Domestic	**166**	**167**	**169**	**174**	**179**	**185**	**191**	**196**	**202**	**208**	**214**	**220**	**225**	**229**	**234**	**238**
Miles Flown (000's) (miles)	977 081	994 804	1 022 005	1 037 016	1 052 248	1 067 703	1 083 386	1 099 299	1 115 445	1 126 939	1 136 368	1 143 674	1 148 810	1 151 744	1 152 645	1 153 546
Freight revenue yield per Mile (cents)	16.96	16.76	16.50	16.77	17.04	17.31	17.59	17.87	18.15	18.49	18.84	19.19	19.55	19.92	20.29	20.67
International/Latin America	**5**	**6**	**6**	**7**	**8**	**8**	**9**	**10**	**11**	**11**	**12**	**13**	**13**	**14**	**14**	**14**
Miles Flown (000's) (miles)	31 010	37 277	38 348	41 461	44 677	47 997	51 425	54 964	58 616	61 921	64 820	67 234	69 095	70 347	70 667	70 989
Freight revenue yield per Mile (cents)	16.96	16.76	16.50	16.77	17.04	17.31	17.59	17.87	18.15	18.42	18.70	18.98	19.26	19.55	19.84	20.14
Freight Revenues	**171**	**173**	**175**	**181**	**187**	**193**	**199**	**206**	**213**	**220**	**226**	**232**	**238**	**243**	**248**	**253**

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Report Recommendations

Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

This report was prepared by Diogo Valbom and Renato Dias, a Master in Finance student of Nova School of Business and Economics ("Nova SBE"), within the context of the Field Lab – Equity Research.

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THE IMPACT OF THE STATE OF THE ECONOMY ON THE SHARE PRICE

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Abstract

This analysis consists of a scenario analysis of Southwest Airlines Co.'s share price. Historically, the state of the economy showed a major influence on the share price of airlines and in its operating margins. To test this assumption and understand the distribution of the company's cash flows, a scenario analysis was performed. This scenario analysis was based on the FAA's short-term forecast regarding the key value drivers of the revenues and the fuel cost. Hence, this analysis yielded a statistically expected price per share of $58.76, which varied between $80.61 and $39.67 in the optimistic and pessimistic scenarios, respectively.

Keywords: scenario, share price, key value driver, operating margin

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Relevance of the topic: During the equity research report, it was highlighted the relationship between the state of the U.S.'s economy and the performance of the airline industry, which is characterized by boom-to-bust cycles triggered by both economic expansion and recession. Historically, unfavorable economic conditions have led to a drop in airlines' revenues, since leisure travel is seen as a discretionary expense. The state of the economy can also lead to higher cost pressure, especially those more affected by economic conditions such as fuel or labor expenses. In the past, Southwest Airlines Co. has been improving its operating margin, increasing its EBITDA margin from 15.53% in 2005 to 20.06% at the end of 2018. However, during this period, its operating margins were fluctuating. The largest decrease in the EBITDA margin occurred between the end of 2007 (13.51%) and the second half of 2009 (7.39%)[1], coinciding with the United States' recession driven by the *housing bubble*. According to *Macrotrends* website, this was also noticeable in other industry's players such as American Airlines, Delta Air Lines or United Airlines. Predictably, this trend also led to a lower share price. At the beginning of 2009, Southwest Airlines Co. had a share price of $5.47, the lowest in the last 20 years.

Purpose and scope: The main purpose of this individual analysis is to quantify how the future state of the U.S.'s economy affects Southwest Airlines Co.'s share price. In terms of scope, this individual analysis is focused on the effect that the state of the U.S.'s economy have on the company's revenues and how the operating margins of the company is harmed by it, in the explicit horizon (2019-2024), as it is in this period that the company's key value drivers are better described. This scenario analysis is only focused on the key value drivers related to the Passenger segment in the domestic market since this segment is very prominent in the company's revenues. To understand to what extent the state of the economy has on the company's share price, the key-value drivers and costs will be characterized in three different

[1] Source: Macrotrends, 2019 (https://www.macrotrends.net/stocks/charts/LUV/southwest-airlines/ebitda-margin)

scenarios: optimistic, normal and pessimistic, yielding a share price per scenario. The statistically expected share price is computed using directly the statistically expected revenues and costs in the calculation of the cash flows, while each scenario is computed using the revenues and costs according to the respectful state of the economy.

Data and inputs used: The research conducted to validate the inputs and define the scenarios of this analysis focuses mainly on two issues: understanding how each of the mentioned scenarios is likely to occur and how the value drivers vary in each of the scenarios. For consistency sake, every forecast regarding each scenario will be derived from the *FAA Aerospace Forecast 2019-2039*[2] report by FAA, as this report was the source used during the equity research report and is perceived as a reliable source. Firstly, it is necessary to assess the probability of occurrence of each scenario. In its report, FAA discloses that their economic assumptions for the short-term (which is the case of the explicit horizon) are based on the *IHS Global Insights for February 2019* by IHS Markit. Hence, to compute the probability of occurrence of each scenario, the probabilities disclosed in IHS Markit's report are used, as the FAA used it as a proxy to their forecast. These probabilities are 60% in the normal state of the economy, 15% in the optimistic state and 25% in the pessimistic state[3].

Concerning the forecasts for each scenario, the key value drivers addressed in this analysis are the passenger revenue yield per RPM, load factor, average seats per trip and miles flown.

Regarding passenger revenue yield per RPM, the real growth of this key value driver for each scenario, provided by the FAA, is used. As the FAA's economic assumptions enunciate that are no significant differences in the Consumer Prices Index (CPI) - which are viewed as a proxy for inflation - between each of three scenarios in the explicit horizon (less than 0.01%), each of the three real growth yields is converted to nominal growth yields using 2%. This computation

2 Source: Federal Aviation Administration, 2019 (https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2019-39_FAA_Aerospace_Forecast.pdf?fbclid=IwAR37QVsmjVeS0extOEnzjtJc9KW7UixlkhJM9QyT1mYANLWWzKnKrJLq6ck)
3 Source: Minnesota's State Portal, 2019 (https://mn.gov/mmb-stat/000/az/forecast/2019/revenue-and-economic-update/october-2019.pdf)

guarantee consistency regarding the CAGR used for the normal state of the economy computed during the equity research report. The output of this computation yields a passenger revenue yield per RPM's CAGR of 1.16% in the normal state of the economy (computed and explained in the equity research report), 1.18% in the optimistic state and 1.21% in the pessimistic state.

FAA states that its forecast regarding load factor is relatively similar between the three scenarios. Hence, the CAGR (0.1%) for the normal state of the economy that was computed and explained during the equity research report, is used for every scenario because it is expected that every airline will seek to manage its capacity to meet the demand. That is, if the economic situation forces the company to decrease its activity, it is expected the company to decrease its flights booked, maintaining its aircraft utilization and saving costs. This assumption is consistent with the historical load factor of the industry, where this upward trend continued to be verified even during the 2007-2009 recession[4].

The average seats per trip are expected to remain stable regardless of the scenario. Hence, it is assumed a CAGR of 0.36%, which was computed and explained in the equity research report, in the explicit horizon for each of the three scenarios. It is considered that the time horizon of six years is not long enough for the company to change its future orders. Moreover, it is believed that Southwest Airlines Co. is currently engaged in a long-term corporate strategy of increasing the capacity per airplane and that this strategy will not be affected by the short-term state of the economy (2019-2024).

Regarding miles flown, for each scenario, it is followed the assumption that the company will grow at the pace of this industry in the U.S. since the company has a matured and stable position in this region and it will only grow as a result of changing consumer consumption patterns. Hence, the CAGRs used for each one of the scenarios are based on the FAA's forecast. To calculate it, a synthetic forecast based on the FAA's forecast for ASM and average seats per

4 Source: Bureau of Transportation Statistics, 2019 (https://www.transtats.bts.gov/Data_Elements.aspx?Data=5)

trip for each state of the economy is computed (it should be noted that ASM is the result of the multiplication of miles flown and average seats per trip). This computation yields a result of 1.47% in the normal state, 2.71% in the optimistic state and 0.47% in the pessimistic state.

Regarding operating costs, it is expected that the cost management related to fuel and labor costs to be a key determinant in the company operating margin. Moreover, these costs are intrinsically related to important factors in the economy such as the crude price and the CPI and are severely affected by the state of the economy. According to the *Oliver Wyman* website, in recent periods fuel costs demonstrated to have a degree of association with airlines' operating margin[5]. Furthermore, FAA stated in its forecast that CPI will not have a significant difference between scenarios[2], during the explicit horizon, and did not disclose any forecast for the evolution of labor costs varying between scenarios, probably because this type of cost is not subjected to big fluctuations, compared to fuel expenses, in the short-term. Hence, only the fuel cost growth is used as a proxy to test the different operating margins between scenarios. The oil price CAGRs in different scenarios are computed based on the FAA's forecast regarding the U.S.'s refiners acquisition cost for each state of the economy. This computation resulted in a CAGR of 1.89% in the normal state, 1.63% in the optimistic state and 6.17% in the pessimistic state, during the explicit horizon.

Results: The computation of the statistically expected cash flows (based on the statistically expected revenues and costs) yielded a share price of $58.76 in the DCF valuation method. Afterward, the computation of the cash flows associated with each of the three scenarios led to a share price of $60.71 in the normal state of the economy, $80.61 in the optimistic state and $39.67 in the pessimistic state. Furthermore, it is observable the relationship between the state of the economy and operating margins. At the end of the explicit horizon, it was verified an EBITDA margin of 5.1% in the pessimistic state of the economy, while in the optimistic state

[5] Source: Oliver Wyman, 2019 (https://www.oliverwyman.com/our-expertise/insights/2019/apr/airline-economic-analysis-2018-2019.html)

it was observed an EBITDA margin of 18.1%. This is aligned with the historically verified as the company's EBITDA margin also registered the same difference (nearly 13%) between 2009 (7.39%) and 2018 (20.06%).

Limitations:

1) Corporate strategy when dealing with different economic scenarios: Following the previous point, it is assumed that, regardless of the scenarios, the company will continue to behave accordingly to the industry. However, this may not be the case, as the company can opt for following a different strategy, decreasing margins to maintain the same fares or keeping its margins, passing the rising costs effect through to the clients.
2) Fuel & oil hedging policies: Currently, the company has implemented strategies regarding fuel costs hedging. Hence, the company may not be that much affected cost-wise and, therefore, not required to increase fares at such a degree. As this scenario analysis is performed on an explicit horizon of six years, it is expected that the company can hedge its short-term volatility to some extent.
3) Key value drivers' simultaneity: It is expected that the behavior of the key value drivers will also be affected by the corporate strategy regarding other key value drivers. For instance, if the company manages to not change its fares policies during a harsh economic stage, it can obtain a price differentiation that may allow the company to increase its miles flown.

Future research: The main focus should be trying to assess how the company's corporate strategy would be affected by the state of the economy when managing its activity to meet the demand and try to quantify it through the evolution of key value drivers. Also, the main researchers should try to assess the evolution of key value drivers according to the different industry segments since an airline as Southwest Airlines Co., which is a low-cost and focused on short-term flights, is expected to be more resistant to change fares prices and more affected by the cyclicality in this industry, compared to legacy and long-haul trips airlines, respectively.